AP-69 Apache NEDU #527, Lea County

May 2005 - permit to drill issued pit to be constructed under Rule 50

Sept 2005 - well drilled

Oct 2005 - well logged

July 2006 - leak detected during a "dig and haul" remediation pit closure procedure; material removed to a depth of 10 feet bgs and disposed of at Sundance facility.

July 19, 2006 GW impact reported to District One office and to Santa Fe.

July 31, 2006Additional 9000 cubic yards removed to a depth of 21 ft bgs. (under pit liner)

Nov 2006 form C-141 submitted "drilling pit liner had somehow been compromised and leaked below the liner"

Nov 2006 - Stage 1 investigation required

Feb 2007 - Stage 1 Abatement Plan submitted

"pit liner compromised" doesn't say what type of liner but seems to mean plastic (constructed under Rule 50)

up to 37,000 ppm Cl in soils at 16 ft bgs in the SW quadrant of the pit

groundwater at 62 ft bgs with chlorides at 2007 mg/l



AP-068

GENERAL CORRESPONDENCE

YEAR(S):

2006/2007



VonGonten, Glenn, EMNRD

From:

jerry brian [jrbrian@verizon.net]

Sent:

Thursday, February 15, 2007 7:56 AM

To:

VonGonten, Glenn, EMNRD

Cc:

Harold Swain; Guinn Burks; David Woolf

Subject:

Hungry Horse - Apache NEDU # 527 Stage 1 Abatement Plan

Follow Up Flag: Follow up

Flag Status:

Red

Attachments:

Apache NEDU_527 Stage 1 Abatement Plan.pdf

Hi Glen,

Here is the Stage 1 Abatement Plan for the Apache NEDU # 527. Since it is a large file, I will send the analyticals in a separate email.

Hard copies will follow.

We appreciate your assistance.

Thanks, JB

VonGonten, Glenn, EMNRD

From:

jerry brian [jrbrian@verizon.net]

Sent:

Thursday, February 15, 2007 8:18 AM

To:

VonGonten, Glenn, EMNRD

Cc:

Harold Swain; Guinn Burks; David Woolf

Subject:

Hungry Horse - Apache NEDU #527 analyticals

Follow Up Flag: Follow up

Flag Status:

Red

Attachments:

NEDU #527 analyticals0014.gif; NEDU #527 analyticals0001.gif; NEDU #527

analyticals0014.gif; NEDU #527 analyticals0001.gif; NEDU #527 analyticals0002.gif; NEDU #527 analyticals0003.gif; NEDU #527 analyticals0005.gif; NEDU #527 analyticals0005.gif;

NEDU #527 analyticals0006.gif; NEDU #527 analyticals0007.gif; NEDU #527

analyticals0008.gif; NEDU #527 analyticals0009.gif; NEDU #527 analyticals0010.gif; NEDU #527 analyticals0011.gif; NEDU #527 analyticals0012.gif; NEDU #527 analyticals0013.gif

Hi Glen,

Here are the analyticals for the Apache NEDU #527.

Thanks, JB



ANALYTICAL RESULTS FOR HUNGRY HORSE, LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/20/06 Reporting Date: 09/21/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 09/21/06 Sampling Date: 09/19/06 Sample Type: SOIL & WATER

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: HM

	•	CI_
LAB NO.	SAMPLE ID	(ppm)
H11550-1	BH#3-57' BGS	*1663
H11550-2	BH#3-60' BGS	*656
H11550-3	BH#3-62' BGS	2007
H11550-4	BH#4-25' BGS	*1408
H11550-5	BH#4-30' BGS	*1871
H11550-6	BH#4-35' BGS	*512
H11550-7	BH#4-40' BGS	*432
H11550-8	BH#4-45' BGS	*560
H11550-9	BH#4-50' BGS	*400
H11550-10	BH#4-55' BGS	*16
Quality Cont	rol	960
True Value (DC	1000
% Recovery	•	96
Relative Per	cent Difference	1.0

METHOD: St	andard Methods	4500-CI ⁻ B

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

Chemist Moreno

09-21-06

H11550

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 chart for analysis.

All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential demages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by Circle, its subsidiaries, affiliates or successors arising cut 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.



ANALYTICAL RESULTS FOR HUNGRY HORSE, LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/20/06 Reporting Date: 09/21/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 09/21/06 Sampling Date: 09/19/06 Sample Type: SOIL & WATER Sample Condition: COOL & INTACT

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Quality Cont		960
True Value (JC	1000
% Recovery		96
Relative Per	cent Difference	1.0

METHOD: Standard Methods	4500-CIB
*NOTE: Analyses performed on 1:4 w.v aqueous extract	ts.

Su S. Morene

Date

H11550

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES, INC.
2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240 (505) 393-2476

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

ARDINAL LABORATORIES, INC

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





ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN 4614 N. GRIMES HOBBS, NM 88240 FAX TO:

Receiving Date: 09/15/06 Reporting Date: 09/15/06

Project Owner: APACHE (APA-06-002)

Project Name: NEDU #527
Project Location: NOT GIVEN

Analysis Date: 09/15/06 Sampling Date: 09/14/06 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: HM

		CI_					
LAB NO.	SAMPLE ID	(mg/kg)					
H11539-1	S091406-BH1-25	240					
H11539-2	S091406-BH1-30	112					
H11539-3	S091406-BH1-35	48					
H11539-4	S091406-BH2-25	4319					
H11539-5	S091406-BH2-30	1328					
H11539-6	S091406-BH2-35	128					
H11539-7	S091406-BH3-25	10157					
H11539-8	S091406-BH3-30	11436					
H11539-9	S091406-BH3-35	8237					
H11539-10	S091406-BH3-40	3071					
H11539-11	S091406-BH3-45	2159					
H11539-12	S091406-BH3-50	1695					
Quality Cont	rol	990					
True Value (True Value QC						
% Recovery	· · · · · · · · · · · · · · · · · · ·						
Relative Per	Relative Percent Difference						

METHOD: Standard Methods 4500-Cl'B

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

Chemist Maron

H11539

PLEASE NOTE: Liability and Drumages. 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 analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of this implication service. In no event shall Cardinal to able to rincidental or consequential stamages, including, without limitation, business interruptions, bos of use, or loss of profits incurred by client, its substituties, 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.

ARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240 (915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476 ANALYSIS REQUEST BILL TO Project Manager: Jerry Brian P.O. # Company: Hungry Horse City: HOBBS State: N W Zip: 88241 Phone #: 505-390-6149 Fax #: Address: Project #: APA-06-002 Project Owner: ARACHE City: Project Name: NED以中517 State: Zip: Project Location: Phone #: JOHN GOOD Sampler Name: Fax #: MATRIX FOR LAB USE ONLY PRESERV. SAMPLING Lab I.D. Sample I.D. TIME DATE 5091406-BHI-25 H11539-1 1:00 4 -BH1 - 30 1:20 -3 - BH1 -35 1:40 - BHZ - ZT 2:20 -5 - BHZ -30 2:40 X - BHZ -35 3:00 -BH3-25 3:40 -7 - BH3 - 30 4:00 - 8 X 4:20 -9 -BH3 -35 4:40 30 days past due of the rain of 24% per errum from the original date of ine ☐ Yes ☐ No |Add'l Phone #: Phone Result: ☐ Yes ☐ No Add'l Fax #; Time://-00 REMARKS: Date: Received By: (Lab Staff Time: Delivered By: (Circle One) CHECKED BY: (Initials) Sampler - UPS - Bus - Other:

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

2111 Beechwood, Ableine, TX 79603 101 East Marland, Hobba, NM 88240 (915) 673-7021 [525) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (505) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (505) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (505) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (505) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (505) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (505) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (505) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (506) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (506) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (506) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (506) 383-2326 Fax (506) 383-2376 (915) 673-7021 [525] 673-7020 (506) 383-2326 Fax (506) 383-2376 (506) 383-2326 Fax (506) 383-2326 Fax (506) 383-2376 (507) 474 574 574 574 574 574 574 574 574 574	ast Marland, Hobbs, NM 88240 393-2328 Fax (505) 393-2476
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ANALYTICAL RESULTS FOR **HUNGRY HORSE LLC** ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/06/06 Reporting Date: 09/07/06 Project Owner: APACHE

Project Name: APACHE NEDU #527 Project Location: APACHE NEDU # 527

Analysis Date: 09/07/06 Sampling Date: 09/06/06 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: HM

		CI
LAB NO.	SAMPLE ID	(mg/kg)
		 · · · · · · · · · · · · · · · · · · ·

H11511-1 E - WORKING PIT - 19' BGS	224
H11511-2 NE - 19' BGS	288
H11511-3 SE - 19' BGS	1935
Quality Control	980
True Value QC	1000
% Recovery	98
Relative Percent Difference	1.0

METHOD: Standard Methods 4500-CI^{*}B NOTE: Analyses performed on 1:4 w:v aqueous extracts.

Date

H11511

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 analysis.

All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thiny (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.



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[†] Cardinal cannot accept verbal changes. Please fax written changes to (325) 673-7020.





ANALYTICAL RESULTS FOR **HUNGRY HORSE LLC** ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/05/06 Reporting Date: 09/06/06 Project Owner: APACHE Project Name: NEDU #527 Project Location: LEA COUNTY Analysis Date: 09/06/06 Sampling Date: 08/28/06 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: HM

LAR NO	SAMPLE ID	(mg/kg)				
2. 110.	Order LE 10	(mg/kg)				
H11500-1	NW - 19' BGS	8557				
H11500-2	SW - 19' BGS	8717				
H11500-3	SW - WRK PIT - 19' BGS	5118				
	· .					
-,						
·····						
Quality Cor	ntrol	990				
True Value		1000				
% Recover	% Recovery					
Relative Pe	Relative Percent Difference					

4500-Cl⁻B METHOD: Standard Methods NOTE: Analyses performed on 1:4 w:v aqueous extracts.

09-06-06 Date

H11500

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 cherif 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 displacative 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 substituries, attiliates 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.

ARDINAL LABORATORIES, INC.

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[†] Cardinal cannot accept verbal changes. Please fax written changes to (325) 673-7020.





ANALYTICAL RESULTS FOR HUNGRY HORSE ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 08/17/06

Reporting Date: 08/18/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 08/18/06

Sampling Date: 08/08/06 & 08/16/06

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: AB

LAB NO.	SAMPLE ID	· Cl¯ (mg/kg)
H11451-1	C - 16' BGS	6158
11444546	OF 401 DOO	5000

H11451-1	C - 16' BGS	6158
H11451-2	SE - 16' BGS	5806
H11451-3	NW - 16' BGS	8797
H11451-4	SW - 16' BGS	37988
H11451-5	C WRK PIT - 14' BGS	176
H11451-6	SW WRK PIT - 17' BGS	9677
H11451-7	C - 17' BGS	112
H11451-8	SW - 17' BGS	10477
Quality Con	ntrol	980
True Value	QC	1000
% Recovery	/	98
Relative Pe	rcent Difference	2.0

METHOD: Standard Methods 4500-Cl'B

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

Chemist Mame

Date

H11451

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or ton, shall be limited to the amount paid by chert for amolysis. All claims, including those for needigence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thiny (30) days after completion of the applicable service. In no event shall Cardinals be fiable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its substitutives 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.

ARDINAL LABORATORIES, INC.

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Company Name	(915) 673-7001 Fax		_	5) 3:	3-23	26 F	ax (505				TO		:				AN	ΙΔΙ \	YSIS	DE	QUE				
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[†] Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.





ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 08/07/06 Reporting Date: 08/08/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 08/08/06

Sampling Date: 07/31/06 & 08/07/06

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: HM

Analyzed By: AB

		CIT
LAB NO.	SAMPLE ID	(mg/kg)
H11417-1	SE-10' BGS	12396
H11417-2	NE-10' BGS	17275
H11417-3	C-10' BGS	2255
H11417-4	C-12' BGS	272
H11417-5	SW-12' BGS	26872
H11417-6	NW-12' BGS	16315
Quality Con	trol	980
True Value		1000
% Recovery	,	98
Relative Pe	rcent Difference	2.0

METHOD: Standard Methods 4500-CIB

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

Chemist Worms

<u> 08-08-06</u> Date

H11417

PLEASE NOTE: Liability and Damages. Cardinar's liability and client's exclusive remedy for any claim arising, whether based in contract or tod, shall be limited to the amount paid by client for analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after competition of the applications service. In no event shall Cardinal be liable for incidental or consequential damages, including, whitevolt limitation, business interruptions, loss of use, or loss of profits incurred by client, its substituties, 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.

ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79803 101 (915) 673-7001 Fax (915) 673-7020 (505	ast Marland, Hobbs, NM 8824 393-2326 Fax (505) 393-2476	
Company Name: Hunc V Hose	1	ANALYSIS REQUEST
Project Manager: Ter & Bran	BILL 10 PO#:	
Address: P. U. Bax 1058	Company:	
City: Nabbs State: NZIp: 88241	Attn:	
Phone #: 390-6149	Address:	
Fax#: 393-3386	City:	
Project #: Project Owner: Apache	State: Zip;	
Project Name: UEDU #<27	Phone #:	
Project Location: /ca County	Fax#:	
FOR LAB USE ONLY MATRIX	PRES. SAMPLING	
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-5 Sω-12'R65	8-7-06 2:05	
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parvios. In no every exast Cardinal be base for incidental or consequental detenges, biolating without limitation, business affiliates, or concessor, straing out of or initial to the perfectance of explose hereunder by Cardinal, legaridess of who		residua or otherwise.
Sampler Relinquished: Date: 8.7-6 Received By:	Phone R	e Result 🗋 Yes 💢 Noj Additional Fax #: lesult: 🔘 Yes 💢 No
Time: 3.04	REMARK	
Relinquished By: Data Data Received By:	(Lab Stari)	•
Times: 4 Hope	Il gono	
Delivered By: (Circle One) Sample Cond		
Sample - UPS - Bus - Other: Cool Intact	(Initials)	

[†] Cardinal cannot accept verbal changes. Please fax written changes to 915-573-7020.

ARDINAL LABORATORIES, INC.

	2111 Beechwood,)			•					Pac	n e	of		
Company Name:	(915) 673-7001) 67	3-//	20	(500	739.	3-23	20	rax	(202) 48	3-2410					ÁNTA	LYSIS	יש ע	OTHE					
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[†] Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Atlesia, NM 88210

District III

1000 Rio Brezos Rd., Azlec, 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 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101 Permit 11271 APPLICATION FOR PERMIT TO DRILL

APACHE CORP	Operator Name and Address	OGRID Humber 873
6120 S. Yale, Suite Tulsa, OK 74136-	1224	API Number 30-025-37242
Property Code 22503		Well No. 527

Surface Location UL or Lot Lot Idn Feet From E/W Line Section N/S Line Feet From Township County M 10 218 37E 1310 330 W M Lea

Proposed Pools

EUNICE; BLI-TU-DF, NORTH 22900

***************************************	Work Type New Well	Well Type OIL	Cable/Rotary	Lesse Type State	Ground Level Elevation 3464
***************************************	Multiple N	Proposed Depth 6925	Formation Drinkard	Contractor	Spud Date

Proposed Casing and Cement Program

	Туре	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
			8.625	24		575	
I	Prod	7.825	5.5	17	6925 .	1100	

Proposed Blowout Prevention Program

				process of the second of the s
	Type	Working Pressure	Test Pressure	Manufacturer
	7. w. daniel	· · · · · · · · · · · · · · · · · · ·		The contract of the contract o
	Double Ram	2000	3000	7
- 1	Large : a communication of the contract of the	C	And the second s	§ Iv

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Electronically Signed By: Lana Williams

Title: Orilling Clerk

Date: 05/17/2005

Phone: 918-491-4900

OIL CONSERVATION DIVISION

Electronically Approved By: Paul Kautz

Title: Geologist

Approval Date: 05/18/2005 Expiration Date: 05/18/2006

Conditions of Approval:

There are conditions. See Attached.

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Saraa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-102 Permit 11271

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Name	Pool Code
30-025-37242	EUNICE;BLI-TU-DR, NORTH	22900
Property Code	Property Name	Well No.
22503	NORTHEAST DRINKARD UNIT	527
ogrid no.	Operator Name	Elevation
873	APACHE CORP	3464

Surface And Bottom Hole Location

The second secon	CONTRACTOR OF THE PARTY OF THE	A. c. accident destruction and	(MANON) W	***************************************	***************************************					
UL or Lot	Section	Township	Range	Lot Idn	Feet Fram	N/S Line	ine Feet From E/W Line		County	
M	_10	215	37E	М	1310	S	330	W	Lea	
Dedicat	Dedicated Acres		Infill	Consolid	lation Code		Order			
4	0		;						-	

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X		

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Electronically Signed By: Lana Williams

Title: Drilling Clerk Date: 05/17/2005

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Surveyed By: GARY EIDSON Date of Survey: 03/22/2005 Certificate Number: 12641

Permit Conditions Of Approval C-101, Permit 11271

Operator: APACHE CORP, 873

Well: NORTHEAST DRINKARD UNIT #527

:	OCD Reviewer	Condition							
-	PKAUTZ	Re-seeding mixture will must be approved or authorized by surface owner							
2 to 1000	PKAUTZ	Notice is to be given to the OCD prior to construction of the pit(s)							
	IPKAHIZ :	Pit construction and closure must satisfy all requirements of O.C.D. Rule 19.15.2.50, and the Pit and Below-Grade Tank Guidelines							

Submit 3 Copies To Appropriate District	State o	f New Mex	ico		For	m C-103
Office	Energy, Mineral					4, 2004
District I 1625 N. French Dr., Hobbs, NM 88240	21101 6), 11111111111			WELL API NO.		
District II	OIL CONSER			5. Indicate Type of	0-025-37242	
1301 W. Grand Ave., Artesia, NM 88210	-	th St. Franc	i	STATE D		
District III 1000 Rio Brazos Rd., Aztec, NM 87410	Santa	Fe, NM 875	005	6. State Oil & Gas		
<u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM						
87505 SLINDRY NO	OTICES AND REPORTS ON	WEIIS		7 Lease Name or	Unit Agreement Nam	ne
(DO NOT USE THIS FORM FOR P			N OR PLUG BACK	7. Lease Paine of	Omi rigicoment riun	"
TO A DIFFERENT RESERVOIR. U	USE "APPLICATION FOR I	PERMIT" (FO	ORM C-101) FOR		NEDU	
SUCH PROPOSALS.) 1. Type of Well:	_			8. Well Number		
Oil Well Gas Well	Other .			,	527	•
2. Name of Operator				9. OGRID Numbe		
APACHE CORPORATION 3. Address of Operator				10. Pool name or \	873 Wildcat	
6120 S. YALE, STE. 1500					DR, NORTH 22900	
4. Well Location Unit Letter 1		c .1	0 1: 1	000		
Unit Letter 10 10 Section 10		from the Range	S line and NM		from the <u>VSV</u> ounty LEA	_ line
Section 10		whether DR	R, RKB, RT, GR, etc.			
Pit or Below-grade Tank Application (I	or pit or below-grade tank clo	3,40 sures, a form		1)		
Pit Location: UL Sect Twp			epth to Groundwater		earest fresh water well	l
Distance from nearest surface water	•		-			
feet from theline and				,	•	
12. Check Appropriate Box to Indica	te Nature of Notice, Report of	r Other Data	•			
NOTICE OF	INTENTION TO:		S	JBSEQUENT REF		, , , , , , , ,
PERFORM REMEDIAL WORK	_		REMEDIAL WORK COMMENCE DRIL	7%	ALTERING CASII	NG. [©] [7]
TEMPORARILY ABANDON				42	PLUG AND S ABANDONMENT	الها
PULL OR ALTER CASING [MULTIPLE COMPLETION		CASING TEST AN CEMENT JOB	ID for	Q	71101
OTHER:	•		OTHER SPUD	SUBE CSG TD	LOG PROD. CSG	برونك
		_				
 Describe proposed or completed of RULE 1103. For Multiple Com 	operations. (Clearly state all per pletions: Attach wellbore diagra	tinent details, a um of proposed	and give pertinent dates, it completion or recomple	including estimated dat tion.	e of starting any propos	ed work). SEE
9/2/05 DRILL & SURVEY TO 1283'. C.	APSTAR RIG # 14.		4			
9/3/05- DRILL & SURVEY TO TD @ 68 CSG 29 JTS. CIRC CSG SAFETY TAIL W/ 200 SX CLASS C + 2% CONDUCTOR PIPE. WELD ON COCK, DART VALVE, = 500 LC 7.875 FORMATOIN, 1283-1420: 5904' = 1.25. TRIP OUT HOLE FI 2 JTS. DP, 50 JTS. DP INSTALL	(MEETING. CMT W/ BJ CMT V CACI+.125# CF = 48 BBLS 14.8 HEAD. TEST TO 500 PSI. OK. N UW, 2000 HIGH OKAY. TIH W/ E SURVEY @ 2487.= 1.5, SERV. F OR BIT CHANGE. PICK UP MO	W 375 SX 35:6: # SLURRY W ILPPLE UP BOI BIT#2 TOP OF RIG, CHANGE	5 POZ W/ 6% GEL + 2%C 1.35 YIELD - PLUG BUN P & CHOKE. TESTING 3 CMT. @ 1200 FT. DRILL OIL IN LIGHTPLANT. D	CACI+.25# CF = 125 BE PED & HELD - CIRC RD PARTY BLINDS, C ING CMT, PLUG, FLO PRILL - 5716' - 5936'. C	ILS T2.7# SLURRY W/ I 116 SX CMT. TO PIT. W CSG, PIPE RAMS, CHOP AT COLLAR, FLOAT S UT DRILLING LINE,=10	.88 YIELD - /OC. CUT OFF (E, KELLY HOE. DRLG.)0'. SURVEY @
WASH 90' TO BTM. / CIRC. BT/ INCREASE 7.5 MINITES. T O H LOG. HALLIBURTON RAN COJ NEUTRON 6864 – 200. RUN 5.5' GEL + 5% SALT + .125 # CF + 6 1.29 YIELD - DISPLACE W/ 159 RELEASE RIG 9/16/2005.	FIX AIR LINES, FOUND 7" CR MPENSATED SONIC 6816 - 5000 0" J-55 & L-80 LT&C CSG. RIG I 0 %FI-52 = 325 BBLS 11.8# SLUI BBLS 2% KCL WATER- PLUG	ACK 2' ABOVI 0; DUAL LATE DOWN CSG CF RRY W/ 2.44 Y BUMPED & H	E PIN ON JT # 160 LAY I EROLOG MICROGUARE REW. CIRC CSG. BJ CM IELD & 400 SX 50:50 PC ELD- CIRC 94 SX CMT I	DOWN SAME. SAFET 0 6864 - 5000; SPECTR. I 5 6864 - 5000; SPECTR. I 6 6862 - FC @ 6 7 C W 5 % SALT + .69 FO PIT. ND BOP. SET	Y MEETING, RIG UP L AL DENSITY DUAL SP. 6842 W/ 750 SX 50:50: 6 FL25 = 92 BBLS 14.2# SLIPS. CUT OFF CSG.	OGGERS & ACED POZ C W/ 10% SLURRY W/
I hereby certify that the information above i constructed or closed according to NMO	s true and complete to the best o CD guidelines , a general per	f my knowledg rmit 🔲 or an	ge and belief. I further of (attached) alternative (ertify that any pit or OCD-approved plan	below-grade tank has l].	been/will be
SIGNATURE Jana Willer	TITLE DR	ILLING CLER	K II DATE/C	15/05		
Type or print name LANA WILLIAMS	E-mail address: lan	a.williams@ap	oachecorp.com	Tele	phone No. 918-491-498	30
This space for State use)						
APPPROVED BY	TITLEFEIR	OLEUW E	NGINEERY DA	ET 1 7 2005		
Conditions of approval, if any:						

WELL LOGS

/ A	PI number:	30-025-372	242									
	OGRID:		Operator:	APACHE CORP								
			Property:		ST DRINKA	RD UNIT		# 527				
		/	· · · · · · · · · · · · · · · · · · ·	···								
surface	ULSTR:	M	10	T	218	R	37E					
			1310	FSL	330	FWL						
BH Loc	ULSTR:	M	10	T	21S	R	37E					
	<u></u>		1310	FSL	330	FWL		•				
							•					
Gr	ound Level:	3464	DF:	3474	KB:	3475						
	Datum:	KB			TD:	6862						
					Completio	on Date: (1)	10/7/2005					
	Land:	STATE				s Received:		**Late				
		L					10/27/2005					
Cor	nfideritial:	NO				Date out:						
		period: 90 Da	vs for State &	Fee 1 Year	or federal		<u> </u>					
		(1) is equal t	-	•								
	Logs	(1) is equal	Depth in		<u> </u>							
DSN/SDI			200		Spectral De	nsity Dual S	naced Neutro	on				
DLL/MSI			5000		6864 Spectral Density Dual Spaced Neutron 6864 Dual Laterolog Micro Sperically Focused Log							
DECIMO			0000	0004	Dadi Latero	log micro op	critally rocc	isca Log				
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		OCD TOP	•									
		OCD TOP.	<u> </u>					· · · · · · · · · · · · · · · · · · ·				
Rustler		1276	Strawn									
Tansill		1270	Atoka									
Yates		2637	Morrow									
7R		2858	WOTOW									
T. Bow	ers Sd	2000										
B. Bow		 										
Queen		3431		· <u> </u>								
Penros	e	0.01										
Grayburg		3747										
San And		3979										
Glorieta		5163						· · · · · · · · · · · · · · · · · · ·				
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Tubb		6123										
Drinkard		6440										
Abo	·	6722										
Wolfcam	n	0.22										
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Apache Corporation 6120 S. Yale Ste 1500 Tulsa, OK 74136

NEDU # 527 Lea County New, Mexico M-10-215-37e 1310/5 & 330/w 30.025-37242

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5.05	1	1.75	8.84	14.76
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4.75	2	3.50	16.63	41.91
1.27	1 3/4	3.06	3.89	45.80
1.27	1 1/2	2.63	3.33	49.13
1.27	1	1.75	2.22	51.35
4.76	1	1.75	8.33	59.68
5.08	1	1.75	8.89	68.57
4.74	1 .	1.75	8.30	76.87
4.75	1	1.75	8.31	. 85.18
5.00	1	1.75	8.75	93.93
4.79	. 1	1.75	8.38	102.31
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4.85	-1	1.75	8.49	119.07
4.73	1	1.75	8.28	127.35
	5.05 3.27 4.75 4.75 1.27 1.27 1.27 4.76 5.08 4.74 4.75 5.00 4.79 3.78 4.85	5.05 1 3.27 3/4 4.75 3/4 4.75 2 1.27 1 3/4 1.27 1 1/2 1.27 1 4.76 1 5.08 1 4.74 1 4.75 1 5.00 1 4.79 1 3.78 1 1/4 4.85 1	5.05 1 1.75 3.27 3/4 1.31 4.75 3/4 1.31 4.75 2 3.50 1.27 1 3/4 3.06 1.27 1 1/2 2.63 1.27 1 1.75 4.76 1 1.75 5.08 1 1.75 4.74 1 1.75 4.75 1 1.75 5.00 1 1.75 4.79 1 1.75 3.78 1 1/4 2.19 4.85 1 1.75	4.51 3/4 131/23 Gire 1 5.92 5.05 1 1.75 8.84 3.27 3/4 1.31 4.29 4.75 3/4 1.31 6.23 4.75 2 3.50 16.63 1.27 1 3/4 3.06 3.89 1.27 1 1/2 2.63 3.33 1.27 1 1.75 8.33 5.08 1 1.75 8.33 5.08 1 1.75 8.30 4.74 1 1.75 8.30 4.75 1 1.75 8.31 5.00 1 1.75 8.75 4.79 1 1.75 8.38 3.78 1 1/4 2.19 8.27 4.85 1 1.75 8.49

Michael Roghair - General Manager

The attached instrument was acknowledged before me on the 19⁴¹ day of 100 level 2005 by Michael Roghair - General Manager, CapStar Drilling, L.P.

TAMME HUGGINS
MY COMMISSION EXPIRES
May 21, 2006

Notary Public

KT



Pool Code

State of New Mexico



Pool Name

DISTRICT I

DISTRICT II 1804 W. GRAND AVENUE, ARTESEA, NM 88210

DISTRICT III 1060 Rio Brazos Rd., Aztec, NM 87410

1220 S. ST. FRANCIS DR., BANTA FE, NM 87606

AP(Number

DISTRICT IV

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

☐ AMENDED REPORT

30-025-3	7242		2290	00	Eunic	e; Blinebry	- Tubb - Dri	inkard - Nor	th		
Property C	Code				Property Nam	16 .		Well Num			
22503					NEDU			52			
OGRID No -00873).			APA	Operator Name CHE CORPO		•	Elevation 3464'			
		1			Surface Loc	<u> </u>		1 3+0			
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County		
M	10	21-5	37-E	Lot run	1310	SOUTH	330	WEST	LEA		
		1 21-3	L	<u> </u>	<u> </u>	<u> </u>		1 44231	LLA		
· (-4 M: 1	0	I			,	erent From Sur		7 - A /W A 11m a			
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County		
Dedicated Acres	Joint o	r Infill Co	nsolidation	Code Or	der No.]	<u> </u>		<u> </u>		
OTTA ON	WARIE V	TILL BE AS	SSIGNED '	TO THIS	COMPLETION I	JNTIL ALL INTER	FOTS HAVE BE	EN CONSOLID	ATED.		
NO RELO	WADED !					APPROVED BY		EN CONSOLEDA	AILD.		
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	1		X=8624	37.1 E	,		December 2, 2005				
1	ļ	Ĺ	AT. =32°29	1'22.72" N	v		Date				
			NG. = 103°C	09°28.47" —	w		SURVEYO	R CERTIFICAT	ION		
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	1			l ,	2530.7		11	is plotted from field made by me or	- ,		
1				1 6	is b	8	supervison, on	d that the same is	true and		
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330'	1				Sold Sold Sold Sold Sold Sold Sold Sold	(%) (%)	Date Survey	G. F.O.	DEL		
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	ſ			(2.2.7 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			1 6	CH 22. 2005	-		
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	1			l	ľ		Certificate No	OFESSION AND THE STREET	12641		
↓	1				·		White was	HF2210, Lange			

District I 1625 N. French Dr., Hobbs, NM 88240

1301 W. Grand Avenue, Artesia, NM 88210

District III 1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico Energy, Minerals & Natural Resources

Form C-104 Revised June 10, 2003

Oil Conservation Division

Submit to Appropriate District Office

1220 South St. Francis Dr. 1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505 ☐ AMENDED REPORT REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT ² OGRID Number 00873 Operator name and Address **Apache Corporation** 6120 South Yale, Suite 1500 Reason for Filing Code/ Effective Date NW - 10/7/2005 Tulsa, OK 74136-4224 ⁴ API Number Pool Name ⁶ Pool Code 30 -025-37242 Eunice: Blinebry - Tubb - Drinkard - North 22900 ⁷ Property Code Property Name Northeast Drinkard Unit ⁹ Well Number 22503 Surface Location Range Ul or lot no. Section Township Lot.Idn Feet from the North/South Line Feet from the East/West line County M 10 215 37E 1310 South 330 West 11 Bottom Hole Location UL or lot no. Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line County 12 Lse Code Producing Method Gas Connection 15 C-129 Permit Number 17 C-129 Expiration Date 16 C-129 Effective Date Code 10/07/2005 III. Oil and Gas Transporters

Transporter 19 Transporter Name 18 Transporter ²⁰ POD ²¹ O/G 22 POD ULSTR Location OGRID and Address and Description Plains Pipeline LP Three Allen Center, 333 Clay Houston, TX 77002 Unit A, Sec 2, T 21S, R 37E NEDU Central Tank Battery 195739 o Sid Richardson Gasoline Co. 201 Main Street, Suite 3000 Fort Worth, TX 76102 20809 G Unit A, Sec 2, T 21S, R 37E NEDU Central Tank Battery Dynergy Midstream Services 1000 Louisiana, Suite 5800 Houston, TX 77002 Unit A, Sec 2, T 21S, R 37E NEDUE Central Tank Battery 024650 G IV. Produced Water 24 POD ULSTR Location and Description ²³ POD 2264750 Unit A, Sec 2, T 21S, R 37E, NEDU Central Tank Battery V. Well Completion Data

25 Canad Date 26 Ready Date 25 Spud Date ²⁷ TD 28 PBTD 30 DHC, MC ²⁹ Perforations 09/02/2005 10/07/2005 6862 6843' 5629 - 6687' 31 Hole Siz 33 Depth Set 32 Casing & Tubing Size 34 Sacks Cement 12-1/4" 8-5/8" 12831 575 sx / circ 116 sx 7-7/8" 5-1/2" 68621 1150 sx / TOC 208' CBL VI. Well Test Data 35 Date New Oil 36 Gas Delivery Date 37 Test Date 38 Test Length ³⁹ Tbg. Pressure 40 Csg. Pressure 10/07/2005 10/07/2005 10/19/2005 24 hrs 43 Water 41 Choke Size 42 Oil 44 Gas 45 AOF 46 Test Method 1030 Pumping 47 I hereby certify that the rules of the Oil Conservation Division have OIL CONSERVATION DIVISION been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: Approved by: PETHOLEUM ENGINEER Printed name:
Elaine Linton Title: Title: Approval Date: **Engineering Technician** 0 7 2009 DEC E-mail Address: elaine.linton@apachecorp.com Date: 12/02/2005 Phone: (918)491-5362

Submit To Appropria State Lease - 6 copie		ict Office		_	State of New							Form C-105
Fee Lease - 5 copies District I				Energy,	Minerals and N	atura	al Resour	ces	WELL A	DI NO		Revised June 10, 2003
1625 N. French Dr.,	Hobbs,	NM 83240	İ						30-025-			
District II 1301 W. Grand Aver	nue, Arte	esia. NM 88210)		il Conservation					te Type of	Lease	
District III 1000 Rio Brazos Rd.	Aztec	NM 87410		13	220 South St. F					TATE X		E 🗌
District IV 1220 S. St. Francis D			.		Santa Fe, NM	875	505		State Oil	& Gas Lea	se No.	
				OMPL	ETION REPOR	TAN	VD LOG		dae of lets		7000	
la. Type of Well:					211011101		12 200			me or Unit A		
OIL WE		GAS WE	LL D	DRY 🗆	OTHER				Northeast	Drinkard	Unit	
b. Type of Comp NEW 🔯 VELL		☐ DEER	_	LUG 🔲 BACK	DIFF RESVR. □ OTI	1ED	,					
2. Name of Operat			······································	DACK	KLSVK OII				8. Well No.	· ~~~		
Apache Corpo	oratio	n							527			
3. Address of Open		·							<u> </u>	e or Wildcat		
1	S120 South Yale, Suite 1500 Tulsa, OK 74136-4224								Eunice: B	linebry - T	ubb - D	rinkard - North 229
4. Well Location	ale, c	uite 1500	Tuisa, O	K 7413	0-4224						400 0	TITILE TOTAL ELO
Unit Letter	<u>M</u>	: 13	10 Feet	FromThe	South		_ Line and_	33	0	_ Feet From 7	heW	estLine
Section	10			nship 21		Range			NMPM	Le	a	County
10. Date Spudded 09/02/2005	10. Date Spudded 11. Date T.D. Reached 12. Date Compl. (Ready to Prod.) 13. Elevations (19/02/2005 09/14/2005 10/07/2005 3464'						tions (D	F& RKB, RT, O	GR, etc.)	14. Elev	. Casinghead	
15. Total Depth							Intervals	Rotary Too	als	Cable	Tools	
6862'	İ	6843			ones?			led By	1			10015
19. Producing Inte	-ual(a)		lation Ton	L					X	20 Wee D	1	Surgion Mada
Blinebry, Tubb	avai(s). Drin	, or uns comp nkard	ieuon - 10p,	Bottom, P	AIRC		•	-		No No	rectional S	Survey Made
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23.	IVIG			CA	SING RECO	DD.	(Panart	oll ot-		115		
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5-1/2"		17#		6862	2'	7-7/8	3" 1150 sx / TOC 208' CBL					
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	101		1 20.10		Greek CERTERY	1-00	113511		2-7/8"	6713	361	TACKER SET
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26. Perforation re BLINEBRY 5	ccord (interval, size	and number	906-10	72.75 5030-				RACTURE, (
32 & 6017-20			372 0 -24,0	3000-10	,,,2-75,5550-		PTH INTER			AND KIND		
TUBB 6134-			57 & 632	9-31' 2	JSPF	_	<u>29 - 6020</u> 34 - 6331					ls gel+84k# 20/40 s ls gel+82k# 20/40 s
DRINKARD (6578	-82,6614-	18,54-58	& 6683	-87' 2 JSPF		78 - 6687					ls ďeľ⊭62k# 20/40 s
28					PR		UCTION			/ ₅ ?/	, <u></u>	Salva Edi 40 3
Date First Producti	io n		Production I	Method (F	lowing, gas lift, pumpi				Well Stat	us'(Prod. or .	MILITARY.	2 4 27 27 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
10/07/2005			Pumping						Produ	cing	000	
Date of Test	Hou	rs Tested	Choke S	Size	Prod'n For	Oil	- Вы	Ğ	Gas - MCF	∰ Water 4	Bbl.	Gas - Oil Ratio
10/19/2005	241				Test Period	70		ا	1030	31	পুক এ	14714
Flow Tubing	Casi	ng Pressure	Calculat	ted 24-	Oil - Bbl.		Gas - MCF		Water - Bbl.		Gravity -	API - (Corr.)
Press.			Hour Ra	ite	1	ľ]				
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29. Disposition of	Gas (Sc	old, used for	uel, vented,	etc.)						Test Witne	•	
Sold 30. List Attachmen	tc				•			·		Apache	Corpora	ation
Logs, Deviation		port, C-10	2, C-104									
					sides of this form as	true	and comple	ete to ti	he best of my i	onowledge a	nd belief	
-	1.	/	Da	_	Printed				, ,		,	
Signature		ruso?	into	ر	Name Elaine Lin	ton		Title	Engineerir	ng Technic	cian	Date 12/02/2005
E-mail Address	, e	laine.linto	n@apache	corp.cor	n				1	<u></u>		j

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Souther	astern New Mexico	Northwe	Northwestern New Mexico					
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn "B"					
T. Salt	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"					
B. Salt	T. Atoka	T. Pictured Cliffs	T. Penn. "D"					
T. Yates 2637'	T. Miss	T. Cliff House	T. Leadville					
T. 7 Rivers 2858'	T. Devonian	T. Menefee	T. Madison					
T. Queen 3431'	T. Silurian	T. Point Lookout	T. Elbert					
T. Grayburg 3747'	T. Montoya	T. Mancos	T. McCracken					
T. San Andres 3979'	T. Simpson	T. Gallup	T. Ignacio Otzte					
T. Glorieta 5182'	T. McKee	Base Greenhorn	T. Granite					
T. Paddock	T. Ellenburger	T. Dakota	T.					
T. Blinebry 5646'	T. Gr. Wash	T. Morrison	T.					
T.Tubb 6123'	T. Delaware Sand	T.Todilto	Т.					
T. Drinkard 6458'	T. Bone Springs	T. Entrada	т.					
T. Abo 6722'	T. Rustler 1275'	T. Wingate	Т.					
T. Wolfcamp	Т.	T. Chinle	Т.					
T. Penn	T.	T. Permian	T.					
T. Cisco (Bough C)	T.	T. Penn "A"	T.					

			OIL OR GAS SANDS OR ZONES
No. 1, from	toto		to
No. 2, from	toto		toto
	IMPOR	RTANT WATER SANDS	•
Include data on rate of w	ater inflow and elevation to wi	hich water rose in hole.	
No. 1, from	to	feet	***************************************
		feet	
No. 3, from	to	feet	

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	m To Thickness Lithology		kness Feet Lithology		SS Lithology		From	То	Thickness In Feet	Lithology
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Office Control Contro	Submit 3 Copies To Appro	nriate District	State	of New Me	rico			Form C-103
DESCRIPTION Fleshs, NM 88240 DURING STATE STATE PER	Office	pricae District						March 4, 2004
DISTRICT OF PROPERTY OF LAWS STATED STATE OF PERSONNELLS OIL CONSERVATION DIVISION 1203 SA Francis Dr., Santa Fe, NM 8740 Passet NY 1203 SA Francis Dr., Santa Fe, NM 8740 SUNDRY NOTICES AND REPORTS ON WELLS OO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK OO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK ON WHI IS ON WHI I		, NM 88240	2.				10-025-37242	
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The property of the proposed or completed operations Commenced and the proposed o	·	sia, INM 88210				STATE	FEE.	<u>8</u>
1220 S. & Francis Dr., Sansa F. & MS \$19355 SULTIPN NOTTICES AND REPORTS ON WELLS ON ON TUSE THIS FORM FOR PROPOSALS TO DRILL OR TO DEBERN OR PLUG BACK NO A DIFFERENT RESEMPLYOR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SULFI PROPOSALS.) 1. Type of Well. ON Well Some the Section of the Section of the Section of the Section of the Section of the Section of the Section of The Section of The Section of The Section of The Section of Township 21S Range 37E NoPPM County LEA 1. Leave name or Wildcat 1. Leave Name of Operator A Address of Operator 1. OP Pool name or Wildcat 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. OP Pool name or Wildcat 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. Well Location UL. Sect. Typ. 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. Dead name or Wildcat 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. Dead name or Wildcat 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. Dead name or Wildcat 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. Dead name or Wildcat 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. Dead name or Wildcat 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. Dead name or Wildcat 1. Elevation (Show whether DR, RKB, RT, GR, etc.) 3. Address of Operator 1. Dead name or Wildcat 1. Dead name or Wild		c, NM 87410	Santa	10,1414107	303	6. State Oil & Ga	s Lease No.	
(DO NOT USE THIS FORM FOR PROPOSALS TO RORLLOR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well [2] 2. Name of Operator Oil Well [2] 3. Address of Operator Oil Well [2] 3. Address of Operator Oil Well [3] 3. Address of Operator Oil Well [3] 4. Well Location Unit Letter Oil Township 215 4. Well Location Unit Letter Oil Township 215 4. Well Location Unit Letter Oil Township 215 4. Well Location Unit Letter Oil Township 215 5. Lass of Department of the Section Stown whether DR, RRB, RT, GR, etc.] 3. Address of Operator ARACHE CORP (RR C, R. C.) 4. Well Location Unit Letter Oil Township 215 6. Lass of Department of the Section Stown whether DR, RRB, RT, GR, etc.] 7. Lass of Department of the Section Stown whether DR, RRB, RT, GR, etc.] 7. Lass of Department of the Section Stown whether DR, RRB, RT, GR, etc.] 8. Well Number 9. OGRID Number 8. Well Number 8. Well Number 8. Well Number 8. Well Number 8. Well Number 9. OGRID Number 8. Well Number 8. Well Number 8. Well Number 8. Well Number 9. OGRID Number 8. Well Number 9. OGRID Number 8. Well Number 9. OGRID Number 8. Well Number 9. OGRID Number 8. Well Number 9. OGRID Number 8. Well Number 9. OGRID Number 8. Well Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number 9. OGRID Number	1220 S. St. Francis Dr., San	nta Fe, NM						
TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: OI Well		SUNDRY NOT	ICES AND REPORTS O	N WELLS		7. Lease Name or	Unit Agreeme	nt Name
SUCH PROPOSALS. 1. Type of Well SWell Other Oth							MEDII	
1. Type of Well. 2. Name of Operator APACHE CORPORATION 3. Address of Operator (200 S. YALE, STE 150) 4. Well Location Unit Letter (31 Township 218 Range 37E NMPM County LEA line (320 S. YALE, STE 150) 4. Well Location Unit Letter (31 Township 218 Range 37E NMPM County LEA line (320 S. YALE, STE 150) 4. Well Location Unit Letter (320 Township 218 Range 37E NMPM County LEA line (330 S. YALE, STE 150) 4. Well Location (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County LEA line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (340 Township 218 Range 37E NMPM County Lea line (3		SERVOIR. US	E APPLICATION FOR	PERMII (F	ORM C-101) FOR	8. Well Number	MEDO	
Section of Operator	1. Type of Well:							
Application		s Well Ot	ner			9 OGRID Numb		
EUNICE, BIL-TU-DR, NORTH 22900 4. Well Location Uniteter 10 : 1310 feet from the S line and 330 feet from the Use line Section 10 Township 21S Range 37E NMPM County LEA 11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,464 Fit or Below-grade Tank Application. (For pill or below-grade tank chosures, a form C-14M must be attached) Pil Location: UL Seet Twp Rog Pil type Depth to Groundwater Distance from nearest fresh water well Distance from nearest surface water Below-grade Tank Location UL Seet Twp Rog ; feet from the line and feet from the line Subsequent of Notice, Report or Other Data NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK PLUG AND ABANDON CASING TEST AND CASING TEST AND CASING TEST AND CASING TEST AND CASING TEST AND CASING TEST AND CASING TEST AND CEMENT JOB OTHER: SPUD, SURF. CSG, TD, OS PROD. CSG. TD, OS PROD. CSG. TO. THERE SPUD, SURF. CSG. TD, OS PROD. CSG. TO. THERE SPUD, SURF. CSG. TD, OS PROD. CSG. TO. THERE SPUD, SURF. CSG. TD, OS PROD. CSG. TO. THERE SPUD, SURF. CSG. TD, OS PROD. CSG. TSG. TSG. TSG. TSG. TSG. TSG. TSG. T		ION				y. GGRID INGINIS		
Unit Letter								22900
Section 10 Township 21S Range 37E NNPM County LEA 11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,464 Pit or Below-grade Tank Application (For pit or below-grade tank closures, a form C-144 must be attached) Pit Location: UL_Sect_Typ_Rng_; Feet from the	4. Well Location	ΛΛ						1/
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,464 Pit or Below-grade Tank Application. (For pit or below-grade tank closures, a form C-144 must be attached) Pit Location: UL_Sect_Twp_Rag_Pit type_Depth to Groundwater_Distance from nearest fresh water well_ Distance from nearest surface water_Below-grade Tank Location UL_Sect_Twp_Rag_; Cett from theline andfeet from theline 12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WORK ALTERING CASING PULL OR ALTER CASING MULTIPLE CASING TEST AND CEMENT JOB OTHER: OTHER: SPUD, SURF. CSG., TD: GSG.,		10 T						
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NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WORK ALTERING CASING ALTERING CA	feet from the	line and _	feet from the	line				
PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WORK ALTERING CASING ATTEMPORARILY ABANDON CHANGE PLANS COMMENCE DRILLING OPNS ABARDONMENT, ABARDONM	12. Check Appropriate I	Box to Indicate	Nature of Notice, Report	or Other Data	a			-13-
PULL OR ALTER CASING MULTIPLE CASING TEST AND CEMENT JOB OTHER: SPUD, SURF. CSG., TD, LOG. PROD. CSG., 10. COMPLETION CEMENT JOB OTHER: SPUD, SURF. CSG., TD, LOG. PROD. CSG., 11. SPULL 1103. For Multiple Completions: (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEI RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. DRILL & SURVEY TO 1283*. CAPSTAR RIG # 14. 99.005 DRILL & SURVEY TO 1D @ 6862*. DRILL 987 – 1283. SURVEY • 1283 = .75. CIRC TO RUN 8.625 CSG. TO H TO RUN SURFACE CSG. RIG UP & RUN 8.625 CSG 29 JTS. CIRC CSG SAFETY MEETING. CMT W // BI CMT W // 35 SX 35.65 POZ W / 6% GEL + 2%CACH. 23% CF = 125 BBLS 1148* SILENT W // LSW 1104* SURVEY & 1283* EVELOP - LULG BURDE & HELD - CIRC 116 SX CMT. TO PTT. WOC. CUT OF CONDUCTOR PIPE. WELD ON HEAD. TEST TO 500 PSI. OK. NIPPLE UP BOP & CHOKE. TESTING 3 RD PARTY BLINDS, CSG. PIPE RAMS. CFOKE, KELLY COCK, DART VALVE, = 500 LOW. 2000 HIGH OKAY. TH W // BITE 270 PO F CMT. = 120 FT. DRILLING CMT, PLUG FLOAT COLLAR. FLOAT SIGNE. PLUG 125. TRIP OCT HOLE FOR BIT CHANGE, PLUG W // SWOW //				N 🗆				CASING?∐
OTHER: COMPLETION CEMENT JOB OTHER: SPUD, SURF. CSG., TD, LOG. PROD. CSG. RULE 1103. For Multiple Completions: (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEI RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. DRILL & SURVEY TO 1283; CAPSTAR RIG# 14. PROPERTY OF THE WARD OF THE WA	TEMPORARILY ABA	MC-DN	CHANGE PLANS		COMMENCE DRI	LLING OPNS.	_ ا ا د د د المراق	
OTHER: SPUD, SURF. CSG., TD, LOG. PROD. CSG. 3. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEI RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. 9/205 DRILL & SURVEY TO 1283*. CAPSTAR RIG # 14. 9/205 DRILL & SURVEY TO 1283*. CAPSTAR RIG # 14. 9/205 DRILL & SURVEY TO TD @ 6862*. DRILL -987 - 1283. SURVEY - 1283 = .75. CIRC TO RUN 8.625 CSG. T O H TO RUN SURFACE CSG. RIG UP & RUN 8.625 CSG 29 JTS. CIRC CSG SAFETY MEETING. CMT W. BJ CMT W. 975 SX. 35.63 POZ. W/6% GEL + 2%CAC1+.25% CF = 123 BBLS 12.7% SUDRRY W. 1.88 YIELD - TAIL W. 200 SX CLASS C + 2% CAC1+.125% CF = 48 BBLS 14.8% SLURRY W. 1.35 YIELD - P.ULG BUMPED & HELD - CIRC 116 SX CMT. TO PIT. WOC. CUT OF CONDUCTOR PIPE. WELD ON HEAD. TEST TO SO PS1. OK. NIPPLE UP BOP & CHOKE. TESTING 3 RD PARTY BLINDS, CSG. PIPE RAMS, CTOKE, KELLLY COCK, DART VALVE, = 500 LOW, 2000 HIGH OKAY. THI W/ BT#2 TOP OF CMT. @ 1200 FT. DRILLING CMT, PLUG. FLOAT COLLAR, FLOAT SHOE. DRILC. 7.875 FORMATOIN, 1283-1420. SURVEY @ 2487 = 1.5. SERV. RIG., CHANGE COLL. IN LIGHTANT. DRILL - 5116 - 5996. CUT DRILLING INE_100. SURVEY 504 = 1.25. TRIP OUT HOLE FOR BIT CHANGE. PICK UP MOTOR, BIT, MAKE UP SAME, BREAK CIRC. FUNCTION TEST BOP. T I H BREAKING CIRC. @ DC. 2 JTS. DP. 50 JTS. DP INSTALL KSWY & STEPPING RUBBER WASH 90 TO BTM. / CIRC. BTMS UP. DRILG. W/ BIT # 3 - 5996. G130. DRILL - 6700 - 6862*. LOCT 350 PS1 - CHECK SURFACE EQUIP, PUMP SOFTLINE, PRES INCREASE 7.5 MINITES. T O H FIX AIR LINES, FOUND T' CRACK 2' ABOVE PIN ON 17 # 160 LAY DOWN SAME. SAFETY MEETING, RIG UP LOGGERS & LOC. HALLIBURTOIR RAN COMPENSATED SONIC 6816 - 5000; DUAL LATEROLOG MICROGUARD 6864 - 5000; SPECTRAL DENSITY DUAL SPACED NEUTRON 6864 - 200. RUN 5.50* FLOS CS. GRIG DOWN CSG. CREW. CIRC CSG. B1 CMT SHOE 6862 - FC @ 6842 W. 750 SX 50.50* POZ C W 169 GEL +5% SALT + 1.125 FCT F-6 SF-1-52 = 252 BBLS 11.8% SLURRY W. 1.29 YIELD. DISPLACE W 159 BB	PULL OR ALTER CA	SING 🗌			OCMENT IOD	TZ4	ં હે ં	, ² 9/
RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. 9/2/05 DRILL & SURVEY TO 1283'. CAPSTAR RIG # 14. 9/3/05- DRILL & SURVEY TO TO @ 6862'. DRILL - 987 - 1283. SURVEY - 1283 = .75. CIRC TO RUN 8.625 CSG. TO H TO RUN SURFACE CSG. RIG UP & RUN 8.625 CSG 29 JTS. CIRC CSG SAFETY MEETING. CMT W/ BJ CMT W/ 375 SX 35.65 POZ W/ 6% GEL + 2%CACH+ 25% CF = T25 BBLS T2-7#SLURRY W/ 1.88 YIELD - TAIL W/ 200 SX CLASS C + 2% CACH+ 125% CF = 48 BBLS 14.8% SLURRY W/ 1.35 YIELD - PLUG BUM/PED & HELD - CIRC L16 SX CMT. TO PIT. WOC. CUT OF CONDUCTOR PIPE. WELD ON HEAD. TEST TO 500 PSI. OK. NIPPLE UP W/ 1.35 YIELD - PLUG BUM/PED & HELD - CIRC L16 SX CMT. TO PIT. WOC. CUT OF CONDUCTOR PIPE. WELD ON HEAD. TEST TO 500 PSI. OK. NIPPLE UP W/ 1.35 YIELD - PLUG BUM/PED & HELD - CIRC L16 SX CMT. TO PIT. WOC. CUT OF CONDUCTOR PIPE. WELD ON HEAD. TEST TO 500 PSI. OK. NIPPLE UP BOY & CHOKE. TESTING 3 RD PARTY BLINDS, CSC, PIPE RAMS, CFMCK, KELLY COCK, DART VALVE, = 500 LOW, 2000 HIGH OKAY. TIH W/ BITPS TOP OF CATT. @ 1200 FT. DRILLING CMT. PLUG. FLOAT COLLAR, FLOAT SHOE. DRILG. 7.875 FORMATOIN, 1283-1420. SURVEY @ 2487 = 1.5, SERV. RIG. CHANGE OIL IN LIGHTPLANT. DRILL. 5-716: -5906*. CUT DRILLING LINE=-100*. SURVEY & 5904* = 1.25. TRIP OUT HOLE FOR BIT CHANGE. PICK UP MOTOR, BIT, MAKE UP SAME, BREAK CIRC. FUNCTION TEST BOP. TIH BREAKING CIRC. @ DC. 2 JTS. DP, 50 JTS. DP INSTALL KSWS & STRIPPING RUBBER WASH 90 TO BTM. / CIRC. BTMS UP. DRILG. W/ BIT #3 - 5936* - 6130*. DRILL6700* - 6862*. LOST 350 PSI - CHECK SURFACE EQUIP, PUMP SOFTLINE, PRES INCREASE 7.5 MINTTES. TO H FIX AIR LINES, FOUND 7* CRACK 2* ABOVE PIN ON 17 # 160 LAY DOWN SAME. SAFETY MEETING, RIG UP LOGGERS & LOG HALLIBURTON RAN COMPENSATED SONIC 6816 - 5000; DUAL LATEROLOG MICKOGOLVAN DAME. SAFETY MEETING, RIG UP LOGGERS & LOG HALLIBURTON RAN COMPENSATED SONIC 6816 - 5000; DUAL LATEROLOG MICKOGOLVAN DAME. SAFETY MEETING, RIG UP LOGGERS & LOG HALLIBURTON RAN COMPENSATED SONIC 6816 - 5000; DUAL LATEROLOG MICKOGOLVAN DAME. SAFETY ME	OTUED		· ·		CTUEN COUR	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
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DRILL & SURVEY TO TO @ 6862'. DRILL - 987 – 1283. SURVEY - 1283 = .75. CIRC TO RUN 8.625 CSG. TO H TO RUN SURFACE CSG. RIG UP & RUN 8.625 CSG 29 JTS. CIRC CSG SAFETY MEETING. CMT W/ B) CMT W/ 375 SX 35.65 POZ W/ 6% GEL + 2%-CACH25% CF = T25 BBIST2.7% SURRY W/ 1.88 YIELD - TAIL W/ 200 SX CLASS C + 2% CACH125% CF = 48 BBLS 14.8% SLURRY W/ 1.35 YIELD - PLUG BUMPED & HELD - CIRC 116 SX CMT. TO PIT. WOC. CUT OF CONDUCTOR PIPE. WELD ON HEAD. TEST TO 500 PS) LOK. NPPLE UP BOP & CHOKE TESTING 3 RD PARTY BLINDS, CSG. PIPE RAMS, CTROKE, KELLY COCK, DART VALVE, = 500 LOW, 2000 HIGH OKAY. TIH W/ BIT#2 TOP OF CMT. @ 1200 FT. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE. DRILLING CMT, PLUG, FLOAT CMT. BRILLING CMT, PLUG, FLOAT CMT. SHOE. DRILLING CMT, PLUG, FLOAT CMT. BRILLING CMT, PLUG, FLOAT CMT. CMT. SHOE. DRILLING CMT, PLUG, FLOAT CMT. SHOE. DRILLING CMT, PLUG, FLOAT CMT. SHOE. DRILLING CMT, PLUG, FLOAT CMT. SHOE. DRILLING CMT, PLUG, FLOAT CMT. SHOE. DRILLING CMT.					and give permient dates,	mending esumated de	ite of starting any	proposed work). SEE
CSG 29 JTS. CIRC CSG SAFETY MEETING. CMT W/ BJ CMT W/ 375 SX 35:65 POZ W/ 6% GEL + 2%CACI+.25# CF = T25 BBLS T2.7# SLURRY W/ 1.88 YIELD TAIL W/ 200 SX CLASS C + 2% CACI+.125# CF = 48 BBLS 14.8# SLURRY W/ 1.35 YIELD - PLUG BUMPED & HELD - CIRC_116 SX CMT. TO PIT. WOC. CUT OF CONDUCTOR PIPE. WELD ON HEAD. TEST TO 500 PSI. OK. NIPPLE UP BOP & CHOKE. TESTING 3 RD PARTY BLINDS, CSG, PIPE RAMS, CHOKE, KELLY COCK, DART VALVE, = 500 LOW, 2000 HIGH OKAY. TIH W BIT#2 TOP OF CMT. @ 1200 FT. DRILLING CMT, PLUG, FLOAT COLLAR, FLOAT SHOE, DRILG. 7.875 FORMATOIN, 1233-1420. SURVEY @ 2487,= 1.5, SERV. RIG, CHANGE OIL IN LIGHTPLANT. DRILL 5716 - 5936. CUT DRILLING LINE,=100: SURVEY @ 504* = 1.25. TRIP OUT HOLE FOR BIT CHANGE. PICK UP MOTOR, BIT,MAKE UP SAME, BREAK CIRC. FUNCTION TEST BOP. T I H BREAKING CIRC. @ DC. 2 JTS. DP, 50 JTS. DP INSTALL KSW'S & STRIPPING RUBBER WASH 90 TO B TMM. / CIRC BTMS. UP. DRILG. W BIT # 3 - 5936 - 6130. DRILL 6700* - 6862. LOST 350 PSI - CHECK SURFACE EQUIP, PUMP SOFTLINE, PRES INCREASE 7.5 MINTIES. T O H FIX AIR LINES, FOUND 7* CRACK 2* ABOVE PIN ON JT # 160 LAY DOWN SAME. SAFETY MEETING, RIG UP LOGGERS & LOG. HALLIBURTON RAN COMPENSATED SONIC 6816 - 5000; DUAL LATEROLOG MICROCUARD 6864 - 5000; SPECTRAL DENSITY DUAL SPACED NEUTRON 6864 - 200. RUN 5.50* J-55 & L-80 LT&C CSG. RIG DOWN CSG CREW. CIRC CSG. BI CMT SHOE @6862 - FC @6862 FC @6842 W/ 750 SX 50:50* POZ C W/ 10% GEL + 5% SALT + .125 # CF + 6 % FI-52 = 325 BBLS 11.8# SLURRY W/ 1.29 YIELD - DISPLACE W/ 159 BBLS 2% KCL WATER-PLUG BUMPED & HELD- CIRC 94 SX CMT TO PIT. ND BOP. SET SLIPS. CUT OFF CSG. RELEASE RIG 9/16/2005. Thereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines , a general permit or an (attached) alternative OCD-approved plan . TITLE DRILLING CLERK II DATE OF DATE OF DATE OF DATE OF DATE OF DATE OF DATE OF DATE OF DATE OF DATE OF DATE OF DATE OF DA	9/2/05 DRILL & SURVE	Y TO 1283". CAF	STAR RIG # 14.					
WASH 90' TO BTM. / CIRC. BTMS UP. DRILG. W/ BIT # 3 - 5936' - 6130'. DRILL - 6700' - 6862'. LOST 350 PSI - CHECK SURFACE EQUIP, PUMP SOFTLINE, PRES INCREASE 7.5 MINITES. T O H FIX AIR LINES, FOUND 7" CRACK 2" ABOVE PIN ON JT # 160 LAY DOWN SAME. SAFETY MEETING, RIG UP LOGGERS & LOG. HALLIBURTON RAN COMPENSATED SONIC 6816 - 5000; DUAL LATEROLOG MICROGUARD 6864 - 5000; SPECTRAL DENSITY DUAL SPACED NEUTRON 6864 - 200. RUN 5.50' J-55 & L80 LT&C CSG. RIG DOWN CSG CREW. CIRC CSG BJ CMT SHOE @6862 - FC @ 6842 W; 750 SX 50:50 POZ C W/ 10% GEL + 5% SALT + .125 # CF + 6 % FI-52 = 325 BBLS 11.8# SLURRY W/ 2.44 YIELD & 400 SX 50:50 POZ C W/ 5% SALT + .6% FI-25 = 92 BBLS 14.2# SLURRY W/ 1.29 YIELD - DISPLACE W/ 159 BBLS 2% KCL WATER-PLUG BUMPED & HELD- CIRC 94 SX CMT TO PIT. ND BOP. SET SLIPS. CUT OFF CSG. RELEASE RIG 9/16/2005. 1 hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines, a general permit or an (attached) alternative OCD-approved plan SIGNATURE	CSG 29 JTS. CIR(TAIL W/ 200 SX (CONDUCTOR PI COCK, DART VA 7.875 FORMATO 5904' = 1.25. TRIF	C CSG SAFETY N CLASS C + 2% C PE. WELD ON H ALVE, = 500 LOW IN, #283-1420'. S P OUT HOLE FOR	AEETING. CMT W/BJ CMT ACH-125# CF = 48 BBLS 14.8 EAD. TEST TO 500 PSI. OK. 17 7, 2000 HIGH OKAY. TIH W/ JRVEY @ 2487,= 1.5, SERV. R BIT CHANGE. PICK UP MC	W/ 375 SX 35: B# SLURRY W NIPPLE UP BO BIT#2 TOP OF RIG, CHANGI DTOR, BIT,MA	65 POZ W/6% GEL + 2% / 1.35 YIELD - PLUG BUI PP & CHOKE. TESTING 3 F CMT. @ 1200 FT. DRILI E OIL IN LIGHTPLANT. I	CACI+.25# CF = T25 B MPED & HELD - CIRC RD PARTY BLINDS, JING CMT, PLUG, FL DRILL - 5716' - 5936'. (BLS 12.7# SLUR C116 SX CMT. TO CSG, PIPE RAM DAT COLLAR, F CUT DRILLING 1	RY W/ 1.88 YIELD - DPIT. WOC. CUT OFF S, CHOKE, KELLY LOAT SHOE. DRLG. LINE,=100'. SURVEY @
Title DRILLING CLERK II DATE 105 Type or print name LANA WILLIAMS E-mail address: lana. williams@apachecorp.com Telephone No. 918-491-4980 This space for State use)	WASH 90' TO BT INCREASE 7.5 M LOG. HALLIBUR NEUTRON 6864 - GEL +5% SALT 1.29 YIELD - DIS	M. / CIRC. BTMS INITES. T O H F TON RAN COM! - 200. RUN 5.50" + .125 # CF + 6 9 PLACE W/ 159 B	UP. DRILG. W/ BIT # 3 - 593 IX AIR LINES, FOUND 7" CF PENSATED SONIC 6816 - 500 J-55 & L-80 LT&C CSG. RIG 5 FI-52 = 325 BBLS 11.8# SLU	36' - 6130'. DRI RACK 2' ABOV 30; DUAL LAT DOWN CSG (JRRY W/ 2.44	VE PIN ON JT # 160 LAY 'EROLOG MICROGUARI 'REW. CIRC CSG. BJ CM YIELD & 400 SX 50:50 PC	DOWN SAME. SAFE D 6864 - 5000; SPECTR T SHOE @6862 - FC @ DZ C W/ 5% SALT + .6	TY MEETING, R. RAL DENSITY DI 9 6842 W/ 750 SX % FL25 = 92 BBI	IG UP LOGGERS & UAL SPACED (50:50: POZ C W/ 10% .S 14.2# SLURRY W/
Type or print name LANA WILLIAMS E-mail address: lana.williams@apachecorp.com Telephone No. 918-491-4980 This space for State use) APPPROVED BY TITLES LINGUISTEER DARFT 7 7005	I hereby certify that the infor constructed or closed accor	mation above is ding to NMOCI	rue and complete to the best of guidelines , a general per	of my knowled ermit 🔲 or a	ge and belief. I further (attached) alternative	certify that any pit or OCD-approved plan	below-grade ta □.	nk has been/will be
This space for State use) APPPROVED BY TITLE STRUCEUM ENGINEER DAGET 1.7 2005	SIGNATURE pna	Willea	ms	RILLING CLE	<u>rk II</u> DATE <u>//</u>	0/5/05		
APPPROVED BY TITLE STRUCEUM ENGINEERY DARCT 17 2005	Type or print name LANA	VILILIAMS	E-mail address: la	na.williams@a	pachecorp.com	Tel	ephone No. 918-	491-4980
UAIU 4 1/1111	This space for State use)				_	.		
	APPPROVED BY Conditions of approval, if an		TITLE	OLEUW E	NGINEER DA	₩ 1 7 2005		

WELL LOGS

<u> </u>	AFT Humber.	30-023-372		 					
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Apache Corporation 6120 S. Yale Ste 1500 Tulsa, OK 74136

NEDU # 527 Lea County New, Mexico

M-10-215-37e 1310/5 & 330/w 30.025-3724	1.
1310/5 & 330/W	18
30.025-3724	20

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451	4.51	3/4	131,000	. E. 92	5.92
956	5.05	. 1	1.75	8.84	14.76
1283	3.27	3/4	1.31	4.29	19.05
1758	4.75	3/4	1.31	6.23	25.28
2233	4.75	2	3.50	16.63	41.91
2360	1.27	1 3/4	3.06	3.89	45.80
2487	1.27	1 1/2	2.63	3.33	49.13
2614	1.27	1	1.75	2.22	51.35
3090	4.76	1	1.75	8.33	59.68
3598	5.08	1	1.75	8.89	68.57
4072	4.74	1	1.75	8.30	76.87
4547	4.75	. 1	1.75	8.31	85.18
5047	5.00	`1	1.75	8.75	93.93
5526	4.79	1	1.75	8.38	102.31
5904	3.78	1 1/4	2.19	8.27	110.58
6389	4.85	1	1.75	8.49	119.07
6862	4.73	1	1.75	8.28	127.35

Michael Roghair - General Manager

The attached instrument was acknowledged before me on the 19th day of the 2005 by Michael Roghair - General Manager, CapStar Drilling, L.P.

TAMME HUGGINS
MY COMMISSION EXPIRES
May 21, 2006

Notary Public Notary Public

KZ



State of New Mexico

Snersy, Minerals and Natural Resources Department

Form C-10

Revised JUNE 10, 2003

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT (LEED W. FRENCH DE., HORRIS, NM 88240

DISTRICT II
1801 W. GRAND AVENUE, ARTESIA, NN 88210

DISTRICT III 1000 Rio Brazos Rd., Astec. NM 87410

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1220 S. ST. FRANCIS DR., BANTA FR, NM 87505 Pool Code API Number Pool Name 30-025-37242 22900 Eunice; Blinebry - Tubb - Drinkard - North Property Code Well Number NEDU 22503 527 OGRID No. Operator Name Elevation APACHE CORPORATION 00873 3464'

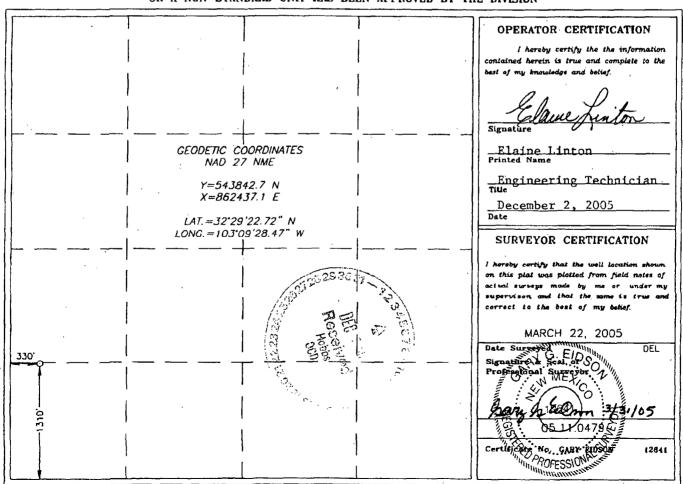
Surface Location

UL or	lot No.	Section	Township	Range	Lot Idn	feet from the	North/South line	Feet from the	East/West line	County
1	M	10	21-S	37-E		1310	SOUTH	330	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot	No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated	Acres	Joint of	r Infill Co	nsolidation (Code Or	der No.		L		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Granc Avenue, Artesia, NM 88210

State of New Mexico Energy, Minerals & Natural Resources Form C-104 Revised June 10, 2003

Submit to Appropriate District Office

District III 1000 Rio Brazos I	Rd., A	ztec, NM	87410					ion Divi				Suo	mui to Aj	5 Copies	
District IV 1220 S. St. Pranci.	s Dr.,	Santa Fe,	NM 87	505				M 8750						AMENDED REPORT	
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E-mail Address	;			ecorp.co	m_				JEU V	(-1	JUJ				
Date: 12/02/2005 Phone: (918)491_5362							\neg	•							

elaine.linton@apachecorp.com

E-mail Address

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

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T. Yates 2637'	T. Miss	T. Cliff House	T. Leadville	
T. 7 Rivers 2858'	T. Devonian	T. Menefee	T. Madison	
T. Queen 3431'	T. Silurian	T. Point Lookout	T. Elbert	
T. Grayburg 3747'	T. Montoya	T. Mancos	T. McCracken	
T. San Andres 3979'	T. Simpson	T. Gallup	T. Ignacio Otzte	
T. Glorieta 5182'	T. McKee	Base Greenhorn	T. Granite	
T. Paddock	T. Ellenburger	T. Dakota	Т.	
T. Blinebry 5646'	T. Gr. Wash	T. Morrison	Т.	
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T. Drinkard 6458'	T. Bone Springs	T. Entrada	T.	
T. Abo 6722'	T. Rustler 1275'	T. Wingate	Т.	
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Include data on rate of wate	er inflow and elevation to whi	ch water rose in hole.	
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VonGonten, Glenn, EMNRD

From: jerry brian [jrbrian@verizon.net]

Sent: Monday, February 05, 2007 1:12 PM

To: Larry Johnson; Johnson, Larry, EMNRD; Larry Johnson; VonGonten, Glenn, EMNRD

Cc: Page McNeill; Page McNeil; Harold Swain; Guinn Burks; David Woolf

Subject: Hungry Horse - Apache NEDU # 527-Work Plan

Hi Glen/Larry

Glen, as I indicated in prior discussions, we were in the process of conducting a "dig & haul" remediation closure on this site. I faxed all analyticals, the approved C-141, and a "Site Summary to you on the 11/8/06."

The current status of this site is that it has been excavated to a depth of 21' bgs. We were in the process of delineating the SW Quadrant to determine the vertical extent of chloride impact. Once that had been established, we were planning on capping the bottom of the entire pit area with a 20 ml liner and backfilling to grade with clean caliche.

We encountered groundwater at 62' in BH #3. The analyticals indicated that the chloride concentration is 2007 ppm. The analytical results for chlorides are as follows:

NW Quadrant (BH # 4)	Depth (bgs) 25' 30' 35' 40' 45' 50'	Chlorides (ppm) 1408 1871 512 432 560 400 16
NE Quadrant (BH #1)	19' 25' 30'	288 240 112
Center	17'	112
SE Quadrant (BH #2)	19' 25' 30' 35'	1935 4319 1328 128
SW Wrk. Pit SE Wrk. Pit	19' 19'	5118 224
SW Quadrant (BH #4)	19' 25' 30' 35' 40' 45' 50' 57' 60' 62'	8717 10,157 11,436 8237 3071 2159 1695 1663 656 2007(groundwater sample)

We would like to propose the following for your consideration and approval:

- 1. excavate the SW Quadrant to a depth of 38' bgs (which would put us at an extrapolated chloride concentration of approximately 5000 ppm) and cap with a 20 ml liner, and then backfill to 21' bgs with clean caliche
- 2. cap the entire excavated pit bottom (21' bgs) with a second 20 ml liner and backfill to grade with clean caliche
- 3. drill three monitor wells (two up-gradient and one down-gradient) to determine groundwater flow and gradient
 - 4. begin to establish plume boundaries
 - 5. evaluate data and modify plan accordingly

A drilling rig is available this week fo drill the monitoring wells.

Please advise. Thanks, JBrian - REM, REPA Geologist

VonGonten, Glenn, EMNRD

From:

jerry brian [jrbrian@verizon.net]

Sent:

Tuesday, February 06, 2007 12:48 AM

To:

Larry Johnson; Johnson, Larry, EMNRD; Larry Johnson; VonGonten, Glenn, EMNRD

Subject:

Hungry Horse - Apache NEDU #527 Site Photos

Attachments: NEDU 527 002.jpg; NEDU # 527 003.jpg; NEDU # 527 002.jpg

Hi Glen,

I am still trying to get this to you...

Thanks, JB

GENERAL CORRESPONDENCE

YEAR(S):

GENERAL CORRESPONDENCE

YEAR(S):

GENERAL CORRESPONDENCE

YEAR(S):

VonGonten, Glenn, EMNRD

From:

VonGonten, Glenn, EMNRD

Sent:

Tuesday, February 06, 2007 7:55 AM

To:

'jerry brian'; Larry Johnson; Johnson, Larry, EMNRD; Larry Johnson

Subject:

RE: Hungry Horse - Apache NEDU #527 Stage 1 Abatement Plan

Follow Up Flag: Follow up

Flag Status:

Red

Jerry,

How about making it due on February 12, 2007? Would that be enough time?

Glenn

From: jerry brian [mailto:jrbrian@verizon.net] **Sent:** Tuesday, February 06, 2007 12:31 AM

To: Larry Johnson; Johnson, Larry, EMNRD; Larry Johnson; VonGonten, Glenn, EMNRD

Subject: Hungry Horse - Apache NEDU #527 Stage 1 Abatement Plan

Hi Glen,

Well it is early in the morning and I really tried to get this to you under the deadline....I ran out of time and lost my file when I started to email it to you. I had printed a rough draft out thankfully and faxed it to you.

If you think that it might be possible to for me to obtain an extension on this, it would be give me time to be more professional.

If not, I understand, and this will have to do for the time being.

I will contact you tomorrow.

Thanks, JBrian

APACHE ENERGY CORPORATION

NEDU # 527

API#30-025-37242

STAGE 1 ABATEMENT PLAN (AP068)

UL-M OF SECTION 10 T21S R37E

LATITUDE: N32⁰ 29.387'

LONGITUDE: 103⁰ 09.502'

LEA COUNTY, NEW MEXICO

FEB. 5, 2007

PREPARED FOR APACHE CORPORATION BY:

Hungry Horse, LLC P.O. Box 1058. Hobbs, New Mexico 88241 Phone (505) 393-3386; Fax (505) 391-4585

1.0 Company Contacts

CONTACT INFORMATION

Apache Corporation:

Harold Swain, Permian Basin Drilling Foreman

Phone: 915-527-3311

email: <u>Harold. Swain@USA.ApacheCorp.com</u> Mailing Address: P.O. Box 848, Wink, TX 79789

Hungry Horse, LLC: Jerry Brian, General Manager/Environmental Consultant

Phone: 505-393-3386 email: jrbrian@verizon.net Mailing Address: P.O. Box 1058, Hobbs, NM 88241

2.0 Introduction

By letter dated November 29, 2006, the New Mexico Oil Conservation Division is requiring Apache Corporation to submit a State 1 investigation proposal to complete the definition of the lateral and vertical extent of groundwater contamination at the Apache NEDU # 527 well site located in Unit M, Section 10, T21S – R37E, Lea County New Mexico. The plan is being required pursuant to OCD Rule 19.E.1 and OCD Rule 19.E.3. The stage 1 abatement plan presented herein complies with the requirements of these rules and incorporates work already performed at the site prior to detection of the groundwater impact.

3.0 Background

On the 7/23/06, Hungry Horse, LLC began to conduct a "dig & haul' remediation pit closure procedure on the NEDU # 527. All drilling material and chloride impacted material below the liner was removed to a depth of 10' bgs and disposed of at Sundance disposal facility.

On the 7/31/06, we began extracting samples beneath the pit liner for chloride analysis. Chloride impacted material has been removed to a depth of 21' bgs. Approximately 9000 yrds³ have been removed and disposed of at Sundance disposal facility.

Vertical delineation continued until impacted groundwater was encountered in the SW Quadrant (BH # 3) at 62' bgs. The impact was reported to the New Mexico

Oil Conservation Division (OCD) District One office in Hobbs and to Glen Von Gotten at the OCD office in Santa Fe, NM on the 7/19/06.

4.0 Investigation Status

Prior to presentation of the Abatement Plan later in the document, the soil and groundwater work performed to date will be briefly reviewed below.

Based on investigation results and pursuant to NMOCD guidelines ("Guidelines for Remediation of Leaks, Spills and Releases" New Mexico Oil Conservation Division — August 13, 1993), Hungry Horse, LLC submitted a Risk Based remedial/clean-up work plan to the NMOCD on the 2/5/07. The work plan included further excavation of high chloride impacted materials above the water table, utilizing a double cap method to prevent any further vertical downward migration of chlorides. It also proposed drilling three initial groundwater-monitoring wells to establish groundwater gradient and water quality.

4.1 Vertical and Horizontal Extent of Contamination in the Vadose Zone

Preliminary investigation of the extent of soil contamination was performed from the 7/31/06 until the 9/19/06.

On the 7/31/06, we began extracting samples beneath the pit liner for chloride analysis. A 5-point sampling plan (see site sampling map) was conducted in the pit area (NW quadrant, NE quadrant, Center, SW quadrant). Sample points were located in the center of each quadrant, and one sample point located in the center of the pit area.

The working pit area closest to the wellhead was divided into 3 areas (E Wrk Pit, Center Wrk Pit, and SW Wrk Pit). Sample points were located in the center of each area.

Samples were extracted from 10' bgs to 19' bgs. Field chloride tests were conducted to determine if chloride concentrations exceeded the acceptable MCL of 250 ppm.

A total of 16 confirmation grab samples were retrieved. These samples were properly packaged, preserved, and transported under Chain-of-Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA Method: 4500-Cl B).

Confirmation samples were extracted in the NE quadrant at 10'bgs, and 19' bgs. Analytical results indicated chloride concentrations were 17275 ppm, and 288 ppm, respectively (see table).

Confirmation samples were extracted in the NW quadrant at 12', 16'and 19' bgs. Analytical results indicated chloride concentrations were 16315 ppm, 8797 ppm, and 8557 ppm, respectively (see table).

Confirmation samples were extracted in the Center quadrant at 10', 12', 16' and 17' bgs. Analytical results indicated chloride concentrations were 2255 ppm, 272 ppm, 6158 ppm, and 112 ppm, respectively (see table).

Confirmation samples were extracted in the SW quadrant at 12', 16', 17', and 19' bgs. Analytical results indicated chloride concentrations were 26872 ppm, 37988 ppm, 10477 ppm, and 8717 ppm, respectively (see table).

Confirmation samples were extracted in the SE quadrant at 10', 16', and 19' bgs. Analytical results indicated chloride concentrations were 12396 ppm, 5806 ppm, and 1935 ppm, respectively (see table).

Confirmation samples were extracted in the Center Wrk Pit at 14' bgs. Analytical results indicated the chloride concentration was 176 ppm (see table).

Confirmation samples were extracted in the SW Wrk Pit at 14', and 19' bgs. Analytical results indicated chloride concentrations were 9677 ppm, and 5118 ppm, respectively (see table).

Confirmation samples were extracted in the E Wrk Pit at 19' bgs. Analytica results indicated the chloride concentration was 224 ppm (see table).

DATE			Oliver Comment
7/31/06	NE	10' BGS	17275
9/6/06	NE	19' BGS	288
7/31/06	NW	12' BGS	16315
8/806	NW NW	16' BGS	8797
9/6/06	NW	19' BGS	8557
7/31/06	C	10' BGS	2255
7/31/06	С	12' BGS	272
8/8/06	С	16' BGS	6158
8/8/06	C	17' BGS	112
7/31/06	SW	12' BGS	26872
8/8/06	SW	16' BGS	37988
8/8/06	SW	17' BGS	10477
9/6/06	SW	19' BGS	8717
7/31/06	SE	10' BGS	12396
8/8/06	SE	16' BGS	5806
9/6/06	SE	19' BGS	1935
8/8/06	C.WRK.PIT	14' BGS	176
8/8/06	SW.WRK.PIT	14' BGS	9677
8/28/06	SW.WRK.PIT	19' BGS	5118

	9/6/06	E.WRK.PIT	19' BGS	224
	9/14/06	BH #1	25' BGS	240
	9/14/06	BH #1	30' BGS	112
	9/14/06	BH #1	35' BGS	48
	9/14/06	BH #2	25' BGS	4319
	9/14/06	BH #2	30' BGS	1328
	9/14/06	BH #2	35' BGS	128
	9/14/06	BH #3	25' BGS	· 10157
	9/14/06	BH #3	30' BGS	11436
	9/14/06	BH #3	35' BGS	8237
	9/14/06	BH #3	40' BGS	3071
	9/14/06	BH #3	45' BGS	. 2159
	9/14/06	BH #3	50' BGS	1695
	9/19/06	BH #3	57' BGS	1663
	9/19/06	BH #3	60' BGS	656
	9/19/06	BH #3	62' BGS	2007*
	9/19/06	BH #4	25' BGS	1408
	9/19/06	BH #4	30' BGS	1871
-	9/19/06	BH #4	35' BGS	512
	9/19/06	BH #4	40' BGS	432
	9/19/06	BH #4	45' BGS	560
	9/19/06	BH #4	50' BGS	400
	9/19/06	BH #4	55' BGS	16

* - Saturated Zone (groundwater sample)

On the 9/14/06 and the 9/19/06, four bore holes (BH #1 - NE quadrant, BH #2 - SE quadrant, BH #3 - SW Quadrant, BH #4 - NW quadrant) (see site sampling map) were drilled and split spoon sampling conducted every 5'. A total of 22 discrete grab samples were retrieved.

The samples were properly packaged, preserved, and transported under Chain-of-Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA Method: 4500-Cl B).

BH # 1- NE quadrant and BH #2 – SE quadrant were sampled at 25', 30', and 35' bgs respectively.

Chloride analysis at 25', 30', and 35' bgs indicated concentrations at BH #1 were 240 ppm, 112 ppm, and 48 ppm, respectively (see table,).

Chloride analysis at 25', 30', and 35' bgs indicated concentrations at BH #2 were 4319 ppm, 1328 ppm, and 128 ppm, respectively (see table.).

BH #3 – SW Quadrant was sampled at 25', 30', 35', 40', 45', 50', 55', 57', 60', and 62' bgs respectively.

Chloride analysis at 25', 30', 35', 40', 45', 50', 57', 60', and 62' bgs indicated concentrations at BH #3 were 10,157 ppm, 11,436 ppm, 8237 ppm, 3071 ppm, 2159 ppm, 1695 ppm, 1663 ppm, 656 ppm, and 2007 ppm (saturated zone), respectively (see table,).

BH #4 – NW Quadrant was sampled at 25', 30', 35', 40', 45', 50', and 55' bgs respectively.

Chloride analysis at 25', 30', 35', 40', 45', 50', and 55'bgs indicated concentrations at BH #4 were 1408 ppm, 1871 ppm, 512 ppm, 432 ppm, 560 ppm, 400 ppm, and 16 ppm, respectively (see table,).

4.2 Groundwater Characterization

Groundwater was encountered in BH #3 at 62' bgs with a chloride concentration of 2007 ppm.

The samples were properly packaged, preserved, and transported under Chain-of-Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA Method: 4500-Cl B).

5.0 Abatement Plan

The purpose of the Stage 1 abatement plan is "to design and conduct a site investigation that will adequately define site conditions, and provide the data necessary to select and design an effective abatement option." Pursuant to OCD Rule 19.E.3, a State 1 abatement plan may include but not be limited to information as needed to select and implement an abatement option. Accordingly, Apache will generate and include the following information and date in the report to be submitted following such site investigation as necessary to determine abatement options. Information previously generated and included with this report is expected to satisfy some to the investigation report requirements.

- a. Descriptions of the site, including a site map, and of site history including the mature of the release that caused the water impact, and a summary of previous investigations;
 Information satisfying much of the requirement is submitted herein. It will be updated as necessary for submittal with the Stage 1 report.
- b. Additional site investigation to define (i) site geology and hydrogeology, the vertical and horizontal extent and magnitude of

groundwater contamination, subsurface hydraulic conductivity, transmissivity, storativity, and rate and direction of contaminant migration, inventory of water wells inside and within one (1) mile from the perimeter of the three dimensional body where the standards set forth in [the rule] are exceeded, and location and number of such wells actually or potentially affected by the impact; and (ii) surfacewater hydrology, seasonal stream flow characteristics, groundwater/surface-water relationships,...[etc.]

Additional investigation is necessary to fill gaps in data already collected at the site, including the drilling and installation of monitor wells, and measurement of aquifer properties. An inventory of water wells will be conducted within one mile of the perimeter of the site and wells that potentially could be affected by the contamination identified. Three temporary monitor wells will be installed and completed as permanent wells with a bentonite seal to within 2 ft. of the surface and a metal protective locking box cemented at the surface. Following evaluation of data collected from the initial monitor wells, additional monitoring wells will be drilled as deemed necessary.

To determine the hydraulic conductivity and transmissivity of the sediments, groundwater slug-tests will be conducted on the monitor wells and the draw down and recovery data analyzed with procedures commonly utilized for the purpose. Determination of storativity usually requires installation of closely spaced monitor wells so that one can serve as an observation well for the pumping well. At this location with a shallow water table, storativity can be estimated from technical publications and a separate monitor well solely for this purpose is not necessary.

No intermittent, ephemeral or permanent sources of surface water are present in the area of the impact, so no hydrological or biological studies of the impact of the release on surface water are necessary.

Monitoring program, including sampling stations and frequencies, for the duration of the abatement plan that may be modified, after approval by the Director, as additional sampling stations are created.

Following installation of the monitoring wells, they will be developed to remove any mud, silt and sand inadvertently introduced during the drilling process. The well locations and elevations will be located and surveyed by a registered professional surveyor. Water levels will be measured quarterly and wells will be sampled quarterly for CoC's following purging to ensure a fresh sample. In addition, the initial sampling will also include major cations and anions to establish a baseline condition for these constituents.

Quality assurance plan, consistent with the sampling and analytical techniques listed in [the Water Quality Control Commission regulations] for all work to be conducted pursuant to the abatement plan.

Samples will be collected and handled in accordance with appropriate protocols for collection, preservation and transport of samples including maintaining a chain-of-custody and record keeping. The analytical laboratory selected to perform the analyses will be monitored for compliance with the applicable QA/QC standards.

e.

A schedule for all Stage 1 abatement plan activities, including the submission of summary quarterly progress reports, and the submission, for approval by the Director, of a detailed final site investigation report.

It is expected that all investigation work proposed within the Stage 1 abatement plan will be completed within three months of the date of approval. Quarterly progress reports will be submitted within 30 days following the end of the previous quarter. The report will include work performed and analytical results from testing of water quality in new and existing monitor wells. A final report will be prepared and submitted within 60 days of the completion of the work.

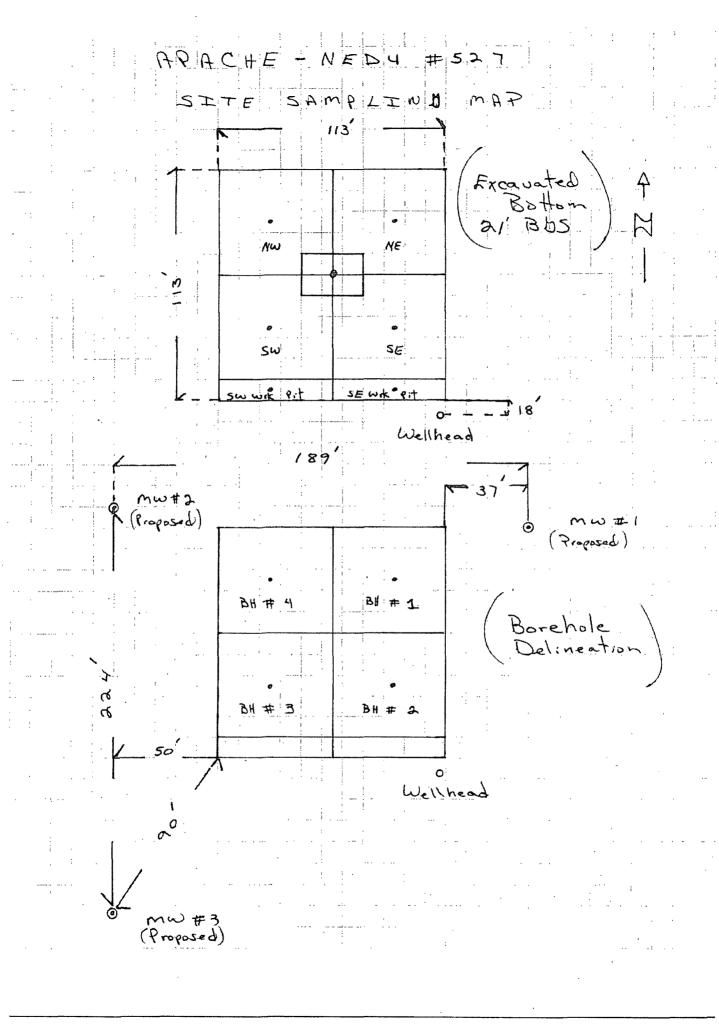
f.

Any additional information that may be required to design and perform and adequate site investigation.

The information necessary to design and perform an adequate site investigation is included in the above paragraphs.

GENERAL CORRESPONDENCE

YEAR(S):





NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor

Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

CERTIFIED MAIL
RETURN RECEIPT NO: 3929 4029 Accd @12(05 (2006)

NOVEMBER 29, 2006

Mr. Harold Swain Apache Corporation P.O. Box 849 Wink, TX 79789

RE: REQUIREMENT TO SUBMIT ABATEMENT PLAN

APACHE CORPORATION NEDU 527

API NO. 30-025-37242

SECTION 10, TOWNSHIP 21 SOUTH, RANGE 37 EAST

LEA COUNTY, NEW MEXICO

AP068

Dear Mr. Swain:

The New Mexico Oil Conservation Division (OCD) has determined after reviewing the *Pit Delineation Plan – Apache Corporation – NEDU # 527* submitted by Mr. Jerry Brian of Hungry Horse Environmental on behalf of Apache Corporation (Apache), that Apache must submit a Stage 1 Abatement Plan in accordance with OCD Rule 19 (19.15.1.19 NMAC) to investigate the ground water contamination at its NEDU 527 drilling pit located in Section 10, Township 21 South, Range 37 East, Lea County, New Mexico. The Stage 1 Abatement Plan proposal must be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office and must meet of all the requirements specified in OCD Rule 19 (19.15.1.19 NMAC), including, but not limited to, the public notice and participation requirements specified in Rule 19G. The Stage 1 Abatement Plan is due sixty (60) days from the receipt by Apache of this written notice.

Apache's Stage 1 Abatement Plan must specifically meet all of the requirements specified in OCD Rule 19E.3, including, but not limited to, a site investigation work plan and monitoring program that will enable it to characterize the chloride release using an appropriate number of isoconcentration maps and cross sections that depict the contamination that has been released

SENDER: COMPLETE THIS SECTION Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. Article Addressed to: MR HAROLD SWALL	A. Signature X A. Signature X Agent Addressee B. Received by Printed Name) C. Date of Delivery 12-5-06 D. Is delivery address different from item 1? If YES, enter delivery address below:			
P.O. TOX 849 WINK, TX 79789	3. Service Type Certified Mail			
2. Article Number	4. Restricted Delivery? (Extra Fee)			
(Transfer from service label) 7001 1940 0004 3929 4029 PS Form 3811, August 2001 Domestic Return Receipt 102595-01-M-2509				

Larry Johnson, OCD Hobbs Chris Williams, OCD Hobbs District Supervisor

Environmental Bureau Chief Wayne Price

Sincerely,

.8846-374

and/or reports, If you have any questions, please contact Glenn von Gonten of my staff at (505) Apache should submit one paper copy with and an electronic copy on CD of all future workplans

appropriate proactive abatement options.

option. Apache may, if it chooses, concurrently submit a Stage 2 Abatement Plan that addresses from the former pit and to provide the data necessary to select and design an effective abatement

Page 2 November 29, 2006 Mr. Harold Swain

RECEIVED

· NOV 27 2006

November 6, 2006

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Mr. Glen Von Gonten Environmental Engineer Specialist NM Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

Reference:

Pit Delineation Plan- Apache Corporation NEDU # 527 Section 10, T21S-R37E API No.: 30-025-37242 Lea County, NM

Mr. Von Gotten:

On the 7/23/06, we began to conduct our "dig & haul" remediation on the NEDU # 527. All contents of the pit were removed and transported to Sundance Disposal Facility, Eunice, NM.

Depth to groundwater is < 50' bgs.

On the 7/31/06, we began extracting samples beneath the pit liner for chloride analysis. A 5-point sampling plan was conducted in the pit area (NW quadrant, NE quadrant, Center, SW quadrant). Sample points were located in the center of each quadrant, and one sample point located in the center of the pit area.

The working pit area closest to the wellhead was divided into 3 areas (E Wrk Pit, Center Wrk Pit, and SW Wrk Pit). Sample points were located in the center of each area.

Samples were extracted from 10' bgs to 19' bgs. Field chloride tests were conducted to determine if chloride concentrations exceeded the acceptable MCL of 250 ppm.

A total of 16 confirmation grab samples were retrieved. These samples were properly packaged, preserved, and transported under Chain-of-Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA Method: 4500-Cl⁻B).

Confirmation samples were extracted in the NE quadrant at 10'bgs, and 19' bgs. Analytical results indicated chloride concentrations were 17275 ppm, and 288 ppm, respectively (see table).

Confirmation samples were extracted in the NW quadrant at 12', 16' and 19' bgs. Analytical results indicated chloride concentrations were 16315 ppm, 8797 ppm, and 8557 ppm, respectively (see table).

Confirmation samples were extracted in the Center quadrant at 10', 12', 16' and 17' bgs. Analytical results indicated chloride concentrations were 2255 ppm, 272 ppm, 6158 ppm, and 112 ppm, respectively (see table).

Confirmation samples were extracted in the SW quadrant at 12', 16', 17', and 19' bgs. Analytical results indicated chloride concentrations were 26872 ppm, 37988 ppm, 10477 ppm, and 8717 ppm, respectively (see table).

Confirmation samples were extracted in the SE quadrant at 10', 16', and 19' bgs. Analytical results indicated chloride concentrations were 12396 ppm, 5806 ppm, and 1935 ppm, respectively (see table).

Confirmation samples were extracted in the Center Wrk Pit at 14' bgs. Analytical results indicated the chloride concentration was 176 ppm (see table).

Confirmation samples were extracted in the SW Wrk Pit at 14', and 19' bgs. Analytical results indicated chloride concentrations were 9677 ppm, and 5118 ppm, respectively (see table).

Confirmation samples were extracted in the E Wrk Pit at 19' bgs. Analytical results indicated the chloride concentration was 224 ppm (see table).

DATE	·	ID	CI
7/31/06	NE	10' BGS	17275
9/6/06	NE	19' BGS	288
7/31/06	NW	12' BGS	16315
8/806	NW	16' BGS	8797
9/6/06	NW	19' BGS	8557
7/31/06	С	10' BGS	. 2255
7/31/06	С	12' BGS	272
8/8/06	С	16' BGS	6158
8/8/06	С	17' BGS	112
7/31/06	SW	12' BGS	26872
8/8/06	SW	16' BGS	37988
8/8/06	SW	17' BGS	10477
9/6/06	SW	19' BGS	8717
7/31/06	SE	10' BGS	12396
8/8/06	SE	16' BGS	5806

	 		
9/6/06	SE	19' BGS	1935
8/8/06	C.WRK.PIT	14' BGS	176
8/8/06	SW.WRK.PIT	14' BGS	9677
8/28/06	SW.WRK.PIT	19' BGS	5118
9/6/06	E.WRK.PIT	19' BGS	224
9/14/06	BH #1	25' BGS	240
9/14/06	BH #1	30' BGS	112
9/14/06	BH #1	35' BGS	48
9/14/06	BH #2	25' BGS	4319
9/14/06	BH #2	30' BGS	1328
9/14/06	BH #2	35' BGS	128
9/14/06	BH #3	25' BGS	10157
9/14/06	BH #3	30' BGS	11436
9/14/06	BH #3	35' BGS	8237
9/14/06	BH #3	40' BGS	3071
9/14/06	BH #3	45' BGS	2159
9/14/06	BH #3	50' BGS	1695
9/19/06	BH #3	57' BGS	1663
9/19/06	BH #3	60' BGS	656
9/19/06	BH #3	62' BGS	2007*
9/19/06	BH #4	25' BGS	1408
9/19/06	BH #4	30' BGS	1871
9/19/06	BH #4	35' BGS	512
9/19/06	BH #4	40' BGS	432
9/19/06	BH #4	45' BGS	560
9/19/06	BH #4	50' BGS	400
9/19/06	BH #4	55' BGS	16

* - Saturated Zone (groundwater sample)

On the 9/14/06 and the 9/19/06, four bore holes (BH #1 - NE quadrant, BH #2 - SE quadrant, BH #3 - SW Quadrant, BH #4 - NW quadrant) were drilled and split spoon sampling conducted every 5'. A total of 22 discrete grab samples were retrieved.

The samples were properly packaged, preserved, and transported under Chain-of-Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA Method: 4500-Cl B).

BH # 1- NE quadrant and BH #2 – SE quadrant were sampled at 25', 30', and 35' bgs respectively.

Chloride analysis at 25', 30', and 35' bgs indicated concentrations at BH #1 were 240 ppm, 112 ppm, and 48 ppm, respectively (see table,).

Chloride analysis at 25', 30', and 35' bgs indicated concentrations at BH #2 were 4319 ppm, 1328 ppm, and 128 ppm, respectively (see table,).

BH #3 – SW Quadrant was sampled at 25', 30', 35', 40', 45', 50', 55', 57', 60', and 62' bgs respectively.

Chloride analysis at 25', 30', 35', 40', 45', 50', 57', 60', and 62' bgs indicated concentrations at BH #3 were 10,157 ppm, 11,436 ppm, 8237 ppm, 3071 ppm, 2159 ppm, 1695 ppm, 1663 ppm, 656 ppm, and 2007 ppm (saturated zone), respectively (see table,).

BH #4 – NW Quadrant was sampled at 25', 30', 35', 40', 45', 50', and 55' bgs respectively.

Chloride analysis at 25', 30', 35', 40', 45', 50', and 55'bgs indicated concentrations at BH #4 were 1408 ppm, 1871 ppm, 512 ppm, 432 ppm, 560 ppm, 400 ppm, and 16 ppm, respectively (see table,).

Groundwater was encountered in BH #3 at 62' bgs with a chloride concentration of 2007 ppm.

Sincerely,

Jerry R. Brian - REM, REPA

Geologist

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88241

District I 1625 N. French Dr. Hobbs, NM 88240 District II ue, 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 Resource NOV 27 2008

Form C-14 Revised October 10, 2001

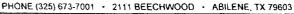
1220 South St. Francis Dr. Santa Fe, NM 87505

Oil Conservation Division
Oil Conservation Division
Oil Conservation Division Division District Office in accordance 1220 S. St. Francis Drive with Rule 116 on back side of form

Santa Fe. NM 87505 Release Notification and Corrective Action **OPERATOR** Initial Report Final Repo Name of Company - Apache Corporation Contact - Harold Swain Address - P.O. Box 849 Wink, TX 79789 Telephone No. - 505-390-4368 Facility Name - NEDU 527 API # - 30-025-37242 Facility Type - Producing Well Mineral Owner Surface Owner LOCATION OF RELEASE 1310 Feet South Line 330 Feet from Unit Letter Section Township Range West Line 37E from the 218 Latitude - N 32 degrees 29.387' Longitude - W 103 degrees 09.502' NATURE OF RELEASE Type of Release - Brine Water Volume of Release Volume Recovered Date and Hour of Occurrence Source of Release - compromised pit liner Date and Hour of Discovery 7/19/06 unknown 7:30 AM If YES. To Whom? Was Immediate Notice Given? Larry Johnson / Glen Von Goten By Whom? Jerry Brian - Hungry Horse Environmental Date and Hour If YES, Volume Impacting the Watercourse. Was a Watercourse Reached? ✓ Yes

☐ No. unknown If a Watercourse was Impacted. Describe Fully.* Analytical results indicated that groundwater has been impacted. Chloride results of groundwater at 62° bgs is 2007 ppm. Describe Cause of Problem and Remedial Action Taken.* 1113 Drilling pit liner had somehow been compromised and leaked below the liner. Field chloride test were conducted and sample taken to Cardinal laboratory under chain-of-custody Describe Area Affected and Cleanup Action Taken.* Pit contents were removed and taken to sundance disposal facility. Soil was tested below the finer. All material exceeding the acceptable MCL of 250 ppm was excavated to a depth of 19 bgs and transported to Sundance disposal. Approval was obtained to cap the excavated bottom with a 20 milliner once vertical delineation had been established. 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 CONSERVATION DIVISION ENVIRO EXAZ Signature: Approved by District Super-Printed Name Approval Date: ((9 06 Expiration Date: Conditions of Approval: Attached [





PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE, LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/20/06 Reporting Date: 09/21/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

RECEIVED

NOV 27 2006

Oil Conservation Division 1220 S. St. Francis Drive

Analysis Date: 09/21/06 NM 87505

Sampling Date: 09/19/06 Sample Type: SOIL & WATER

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: HM

	•	· CI_
LÅB NO.	SAMPLE ID	(ppm)
H11550-1	BH#3-57' BGS	*1663
H11550-2	BH#3-60' BGS	*656
H11550-3	BH#3-62' BGS	2007
H11550-4	BH#4-25' BGS	*1408
H11550-5	BH#4-30' BGS	*1871
H11550-6	BH#4-35' BGS	*512
H11550-7	BH#4-40' BGS	*432
H11550-8	BH#4-45' BGS	*560
H11550-9	BH#4-50' BGS	*400
H11550-10	BH#4-55' BGS	*16
Quality Cont	rol .	960
True Value QC		1000
% Recovery	% Recovery	
Relative Per	cent Difference	1.0

METHOD: Standard Methods 4500-CIB

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

Chemist

Date

H11550

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 analysis: All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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 profils incurred by client, its substituties, 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.





PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN 4614 N. GRIMES HOBBS, NM 88240 FAX TO:

Receiving Date: 09/15/06 Reporting Date: 09/15/06

Project Owner: APACHE (APA-06-002)

Project Name: NEDU #527
Project Location: NOT GIVEN

Analysis Date: 09/15/06 Sampling Date: 09/14/06 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: HM

CI

		•
LAB NO.	SAMPLE ID	(mg/kg)
H11539-1	\$091406-BH1-25	240
H11539-2	S091406-BH1-30	112
H11539-3	S091406-BH1-35	48
H11539-4	S091406-BH2-25	4319
H11539-5	S091406-BH2-30	1328
H11539-6	S091406-BH2-35	128
H11539-7	S091406-BH3-25	10157
H11539-8	S091406-BH3-30	11436
H11539-9	S091406-BH3-35	8237
H11539-10	S091406-BH3-40	3071
H11539-11	S091406-BH3-45	2159
H11539-12	S091406-BH3-50	1695
Quality Control		990
True Value QC		1000
% Recovery	% Recovery	
Relative Per	Relative Percent Difference	

METHOD: Standard Methods 4500-CIB

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

Chemist

Date

H11539





PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/06/06 Reporting Date: 09/07/06 Project Owner: APACHE

Project Name: APACHE NEDU #527
Project Location: APACHE NEDU # 527

Analysis Date: 09/07/06 Sampling Date: 09/06/06 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: HM

			Ci [—]
LAB NO.	SAMPLE ID		(mg/kg)

H11511-1 E	- WORKING PIT - 19' BGS	224
H11511-2 NI	E - 19' BGS	288
H11511-3 SI	- 19' BGS	1935
7-1-14		
		_
Quality Control		980
True Value QC		1000
H11511-2 NE - 19' BGS H11511-3 SE - 19' BGS		98
Relative Percen	t Difference	1.0

METHOD:	Standard	Methods		4500-CITB

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

Chemist

Date

H11511

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 any disease. 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. 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 cardinals, 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.





PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/05/06
Reporting Date: 09/06/06
Project Owner: APACHE
Project Name: NEDU #527

Project Location: LEA COUNTY

Analysis Date: 09/06/06 Sampling Date: 08/28/06 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: HM

CI LAB NO. SAMPLE ID (mg/kg) HI11500-1 NW - 19' BGS 8557 H11500-2 SW - 19' BGS 8717 H11500-3 SW - WRK PIT - 19' BGS 5118 Quality Control 990 True Value QC 1000 % Recovery 99 Relative Percent Difference

METHOD: Standard Methods 4500-CITB

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

Chemist . M. orma

Date

H11500



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386 .

Receiving Date: 08/17/06
Reporting Date: 08/18/06
Project Owner: APACHE
Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 08/18/06

Sampling Date: 08/08/06 & 08/16/06

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: AB

		Cl
LAB NO.	SAMPLE ID	(mg/kg)
H11451-1	C - 16' BGS	6158
H11451-2	SE - 16' BGS	5806
H11451-3	NW - 16' BGS	8797
H11451-4	SW - 16' BGS	37988
H11451-5	C WRK PIT - 14' BGS	176
H11451-6	SW WRK PIT - 17' BGS	9677
H11451-7	C - 17' BGS	112
H11451-8	SW - 17' BGS	10477
Quality Con	trol	980
True Value	QC	1000
% Recovery	/	98
Relative Pe	rcent Difference	2.0

METHOD: Standard Methods 4500-CIB

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

Chemist . Mano

Date

H11451

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 analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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 services hereunder by Cardinal. regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 08/07/06 Reporting Date: 08/08/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 08/08/06

Sampling Date: 07/31/06 & 08/07/06

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: HM

Analyzed By: AB

CI

2.0

LAB NO.	SAMPLE ID		(mg/kg)
H11417-1	SE-10' BGS		12396
H11417-2	NE-10' BGS		17275
H11417-3	C-10' BGS		2255
H11417-4	C-12' BGS	111111111111111111111111111111111111111	272
H11417-5	SW-12' BGS		26872
H11417-6	NW-12' BGS	,	16315
Quality Con	itrol		980
True Value	QC	'	1000
% Recovery	/		98

METHOD: Standard Methods 4500-CIB

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

Relative Percent Difference

Chemist

Date

H11417

ARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2	111 Beechwood, Abi																					Page		of		
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^{. †} Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

ARDINAL LABORATORIES,

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES, INC.
2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240

	(915) 673-7001 Fax (915) 673-702	Pageor															
Company Name:	HOLING AN HOLD	LLC	BILL	TO	ANALYSIS REQUEST												
Project Manager	: Simi		P.O. #:														
Address: 🔎	1.0. Box 1058		Company:														
City: Ad	State: Nm	Zip: 88241	Attn:														
Phone #:	390-6149 Fax# 39	3-3386	Address:														
Project #:	Project Owner:	Apache	City:	_					1 1								
Project Name:	NEDU #527		State: Zip:]	}			!								
Project Location	: Lea Crity		Phone #:]												
Sampler Name:	J- Brian		Fax #:														
FOR LAB USE ONLY		MATRIX	PRESERV. S	AMPLING]												
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[†] Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

ARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240 (915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Company Name:	Hungry Horse ice	BILL TO		ANALYSIS REQUEST											
Project Manager	Jerry Brian		P.O. #:												
Address:			Company: Hungry	Jorse	1 1			1 1	1						
City: HOBT	State: N W	ZIp: 88241	Attn:												
Phone #: 505	-390-6149 Fax#:		Address:					•							
Project#: A 6 (9-00-00 Z Project Owner:	•					1 1	l l							
Project Name:	NEDU# 517	•	State: Zip:					.							
Project Location	1:		Phone #:				}								
Sampler Name:	JOHN GOOD		Fax #:			1	'			·					
, FOR LAB USE ONLY		MATRIX	PRESERV. SAMPL	ING		1									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL CRUDE OIL	OTHER: ACID/BASE: ICE / COOL OTHER:	TIME											
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ensiyees. All claims including service. In no event shall Ca	d Damagoa. Cardinal's liability and olient's acclusive remody for any githous for negligence and any other cause whatsiever shall be does retaut be liable for incidental or consequental damages, including will goul of or related to the performance of services horeunder by Car	ned waived unlose made in writing and re out limitation, businese interruptions, loss	pelved by Cardinal within 30 days after com of use, or loss of profits incurred by client,	pletion of the applicates subsidiation.	i		30 days past o	onditions: interest wi due at the rate of 24% if collections, including	per armum from th	accounts more than ne original data of involce,					
Sampler Relingu	Date: 9-15-06	Received By:	cores spor. By or the moved states reason.	Phone Res Fax Result REMARKS	: 🗆 Yes	□ No □ No	Add'l Phone Add'l Fax #:	#:							
Relinguished By Delivered By: Sampler - UPS	Time:	Received By: (Lab State of Lab	CHECKED BY: (Initials)	REMARKS											

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240 (915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Page $\overline{2}$ of $\overline{2}$

Company Name: Hugry Horse LLC											81	LL TO		ANALYSIS REQUEST												
Project Manager	" Jerry "	Brian						P.(). #:																	
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City: Hot	shs	State: N m	Zip	:	88	24	1	Att	in:							ł	i	1						'		
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Project #: APA - 06-002 Project Owner: APACHE					-	City:]	1	. 1				
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[†] Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

ARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240 (325) 673-7001 Fax (325) 673-7020 (505) 393-2326 Fax (505) 393-2476 Company Name: ANALYSIS REQUEST BILL TO Project Manager: P.O. #: Address: Company: zip: 88240 City: State: 12m Attn: Phone #: Fax #: Address: Project #: Project Owner: Cubuch City: Project Name: State: Zip: Project Location: Phone #: Sampler Name: Fax #: FOR LAB USE ONLY MATRIX PRESERV. SAMPLING Sample I.D. Lab I.D. SOIL DATE TIME H11511-1 Z 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 firnled to the amount paid by the client for the wrms and Conditions: Interest will be charged on all accounts more than analyses. All claims including those for registence and any other cause whatsoever that be deemed waterd unless made in writing and received by Cardinal within 30 days after completion of the applicable 30 days past due at the rate of 24% per annum from the original date of impice, service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business inferruptions, loss of use, or loss of profits incurred by others, its subsidieries, and all costs of collections, including attorney's ites. efficies or successore efficing out of or related to the performance of services hersunder by Cerdinal, regardless of whether such claim is based upon any of the above stated resears or otherwise Sampler Relinquished Received By: C Yes Prione Result: D No ☐ Yes D No Fax Result; REMARKS: Relinquished By: Received By: (Lab Staff) Deliyered By: (Circle One) ample Condition Intact? By: Samples - UPS - Bus - Other: Yes (Initials)

[†] Cardinal cannot accept verbal changes. Please fax written changes to (325) 673-7020.



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[†] Cardinal cannot accept verbal changes. Please fax written changes to (325) 673-7020.

ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603	101 East Marland, Hobbs, NM 88240
(04E) 672 7004 E. (04E) 674 7000	(EDE) 000 0000 F (EDE) 000 0470

Company Name:		Horse		,						L 7	0				·		ANAL	YSIS	REC	QÜES	ST.			
Project Manager	213	\					P.O.			***********														
Address: R	D. Box 10:	58					Corr	pany:		**				İ									٠.	
City: Hol	200	State: NM 2	ip:	88	کرد	11	Attn	:						1										
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[†] Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

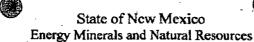
ARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240 (915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476 Company Name: ANALYSIS REQUEST Project Manager: BILL TO PO #: Address: Company: State: W/Zip: 8824 City: Attn: Phone #: Address: Fax #: City: Project #: Project Owner: State: Zip: Project Name: Phone #: Project Location: Fax #: MATRIX SAMPLING FOR LAB USE ONLY PRES. (G)RAB OR (C)OMP WASTEWATER Sample I.D. LAB I.D. DATE TIME H11417 PLEASE NOTE: Liability and Damages. Cardinars liability and citent'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 Terms and Conditions: Interest will be charged on all accounts more than 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 30 days past due at the rate of 24% per annun from the original date of invoice, s divide. In no event shall Candinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its substdaries, and all costs of collections, including sitomey's fees utilistes of successors arising out of or related to the performance of services hereunder by Cardinal, regardess of whether such claim is based upon any of the above stated reasons or otherwise, Sampler Relinquished: D No Additional Fax #: Fax Result: Yes □ No REMARKS: Received By: (Lab Staff) Delivered By: (Circle One) Sample Condition CHECKED BY: Cool Intact
Yes 12 Yes (Initials) Sampler - UPS - Bus - Other:

[†] Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

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 South St. Francis Dr.

Hungry Horse

Oil Conservation Division

Form C-141 Revised October 10, 2003

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

1220 S. St. Fra	ncis Dr., Sant	a Fe, NM 8750	5	Sa	anta I	e, NM 875	505				•	side of form
			Rele	ease Notifie	catio	n and C	orrective A	ction	1			. '
						OPERA'	ГOR		Anit	ial Report	П	Final Repor
Name of Co	ompany –	Apache Corp	oration				larold Swain	/				
		49 Wink, T					No 505-390-4	368				
		U 527 API #		5-37242	` _		e - Producing \					
Surface Ov	mer			Mineral (Owner			•	Lease	No.		
				LOC	ATIO	N OF RE	FASE					
Unit Letter	Section	Township	Range	1310 Feet		h Line	330 Feet from	West	Line	County		
Oilt Doilt	10	218	37E	from the	0000		the	l l l	Line	Lea		
		Latitude	- N 32 d	_	-	itude - W 10	 3 degrees 09.50 EASE	2'				· · · · · ·
Type of Rele	asc - Brin	e Water				Volume of			Volume	Recovered		
		promised pit	liner			Date and I	Hour of Occurrence	æ	Date and 7:30 AM	Hour of Dis	covery 7	/19/06
Was Immedi	ate Notice (Given?				If YES, To	Whom?		7.30 AUV			
			Yes [No □ Not R	equire		son / Glen Von G	oten	•			
		- Hungry Hon	se Enviror	mental		Date and I						
Was a Water	course Read		Yes [] No		If YES, Vo	olume Impacting t	the Wat	ercourse.			
If a Waterco	urse was Im	pacted, Descr	ibe Fully.	•			•	·				
Analytical re	sults indica	ted that groun	dwater ha	s been impacted.	Chlor	ide results of g	roundwater at 62	'bes is	2007 ppm.	•		
Describe Ca	use of Probl	em and Reme	dial Actio	n Taken.*				·				
Drilling pit I under chain-		nehow been c	ompromis	ed and leaked bel	low the	liner. Field cl	hloride test were o	conduct	ed and sam	iple taken to	Cardinal	laboratory
Describe An	ea Affected	and Cleanup	Action Tal	cen.*								· · · · · ·
		-	•							_		
ppm was exc	cavated to a	depth of 19'	bgs and tr	e disposal facility ansported to Sum	y. Soil dance c	was tested bel lisposal. Appr	ow the liner. All: oval was obtained	materia l to cap	I exceeding the excava	g the acceptal ted bottom v	ble MCL with a 20	of 250 ml liner
once vertical	delineation	had been est	ablished.									
*												
regulations a public health should their or the environ	di operators or the envi operations i onment. In a	are required to comment. The save failed to	o report a acceptan adequately OCD acceptantal	nd/or file certain ce of a C-141 rep investigate and	release ort by t remedi	notifications a the NMOCD mate contaminat	knowledge and used perform correct narked as "Final Ricon that pose a three the operator of	ctive act leport" (reat to g	tions for re does not re round wate	leases which lieve the ope er, surface w	may end rator of l ster, hum	danger liability nan health
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Signature:	LB	s iver	Jan 1	A mache	N 1940.							
Printed Nam	e L	R ~~	ian	.,,	. 4	Approved by	District Supervis	or:				1
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November 6, 2006

Mr. Glen Von Gotten Environmental Engineer Specialist NM Oil Conservation Division 1625 N. French Dr. Hobbs, NM 88240

Reference:

Pit Delineation Plan- Apache Corporation NEDU # 527 Section 10, T21S-R37E API No.: 30-025-37242 Lea County, NM

Mr. Von Gotten:

On the 7/23/06, we began to conduct our "dig & haul" remediation on the NEDU # 527. All contents of the pit were removed and transported to Sundance Disposal Facility, Eunice, NM.

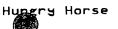
Depth to groundwater is < 50' bgs.

On the 7/31/06, we began extracting samples beneath the pit liner for chloride analysis. A 5-point sampling plan was conducted in the pit area (NW quadrant, NE quadrant, Center, SW quadrant). Sample points were located in the center of each quadrant, and one sample point located in the center of the pit area.

The working pit area closest to the wellhead was divided into 3 areas (E Wrk Pit, Center Wrk Pit, and SW Wrk Pit). Sample points were located in the center of each area.

Samples were extracted from 10' bgs to 19' bgs. Field chloride tests were conducted to determine if chloride concentrations exceeded the acceptable MCL of 250 ppm.

A total of 16 confirmation grab samples were retrieved. These samples were properly packaged, preserved, and transported under Chain-of-Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA Method: 4500-CIB).



Confirmation samples were extracted in the NE quadrant at 10'bgs, and 19' bgs. Analytical results indicated chloride concentrations were 17, 275 ppm, and 288 ppm, respectively (see table).

Confirmation samples were extracted in the NW quadrant at 12', 16' and 19' bgs. Analytical results indicated chloride concentrations were 16315 ppm, 8797 ppm, and 8557 ppm, respectively (see table).

Confirmation samples were extracted in the Center quadrant at 10', 12', 16' and 17' bgs. Analytical results indicated chloride concentrations were 2255 ppm, 272 ppm, 6158 ppm, and 112 ppm, respectively (see table).

Confirmation samples were extracted in the SW quadrant at 12', 16', 17', and 19' bgs. Analytical results indicated chloride concentrations were 26872 ppm, 37988 ppm, 10477 ppm, and 8717 ppm, respectively (see table).

Confirmation samples were extracted in the SE quadrant at 10', 16', and 19' bgs. Analytical results indicated chloride concentrations were 12396 ppm, 5806 ppm, and 1935 ppm, respectively (see table).

Confirmation samples were extracted in the Center Wrk Pit at 14' bgs. Analytical results indicated the chloride concentration was 176 ppm (see table).

Confirmation samples were extracted in the SW Wrk Pit at 14', and 19' bgs. Analytical results indicated chloride concentrations were 9677 ppm, and 5118 ppm, respectively (see table).

Confirmation samples were extracted in the E Wrk Pit at 19' bgs. Analytical results indicated the chloride concentration was 224 ppm (see table).

100 Teach 1 2005			
7/31/06	NE	10' BGS	17275
9/6/06	NE	19' BGS	288
7/31/06	NW	12' BGS	16315
8/806	NW	16' BGS	8797
9/6/06	NW _	19' BGS	8557
7/31/06	С	10' BGS	2255
7/31/06	С	12' BGS	272
8/8/06	С	16 BGS	6158
8/8/06	С	17' BGS	112
7/31/06	SW	12' BGS	268 72
8/8/06	SW	16' BGS	37988
8/8/06	SW	17' BGS	10477
9/6/06	SW	19' BGS	8717

7/31/06	SE	10' BGS	12396
8/8/06	SE	16' BGS	5806
9/6/06	SE	19' BGS	1935
8/8/06	C.WRK.PIT	14' BGS	176
8/8/06	SW.WRK.PIT	14' BGS	9677
8/28/06	SW.WRK.PIT	19' BGS	5118
9/6/06	E.WRK.PIT	19' BGS	224
9/14/06	BH#1	25' BGS	240
9/14/06	BH #1	30' BGS	112
9/14/06	BH#1	35' BGS	48
9/14/06	BH #2	25' BGS	4319
9/14/06	BH #2	30' BGS	1328
9/14/06	BH #2	35' BGS	1:28
9/14/06	BH #3	25' BGS	10157
9/14/06	BH #3	30' BGS	11436
9/14/06	BH #3	35' BGS	8237
9/14/06	BH #3	40' BGS	3071
9/14/06	BH #3	45' BGS	2159
9/14/06	BH #3	50' BGS	1695
9/19/06	BH #3	57' BGS	1663
9/19/06	BH #3	60' BGS	656
9/19/06	BH #3	62' BGS	2007
9/19/06	BH #4	25' BGS	1408
9/19/06	BH #4	30' BGS	1871
9/19/06	BH #4	35' BGS	512
9/19/06	BH #4	40' BGS	432
9/19/06	BH #4	45' BGS	560
9/19/06	BH #4	50' BGS	400
9/19/06	BH #4	55' BGS	16

On the 9/14/06 and the 9/19/06, four bore holes (BH #1 - NE quadrant, BH #2 - SE quadrant, BH #3 - SW Quadrant, BH #4 - NW quadrant) were drilled and split spoon sampling conducted every 5'. A total of 22 discrete grab samples were retrieved.

The samples were properly packaged, preserved, and transported under Chain-of-Custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. All samples were analyzed for Chlorides (EPA Method: 4500-ClB).

BH # 1- NE quadrant and BH #2 - SE quadrant were sampled at 25', 30', and 35' bgs respectively.

Chloride analysis at 25', 30', and 35' bgs indicated concentrations at BH #1 were 240 ppm, 112 ppm, and 48 ppm, respectively (see table,).

Chloride analysis at 25', 30', and 35' bgs indicated concentrations at BH #2 were 4319 ppm, 1328 ppm, and 128 ppm, respectively (see table,).

BH #3 – SW Quadrant was sampled at 25', 30', 35', 40', 45', 50', 55', 57', 60', and 62' bgs respectively.

Chloride analysis at 25', 30', 35', 40', 45', 50', 57', 60', and 62' bgs indicated concentrations at BH #3 were 10,157 ppm, 11,436 ppm, 8237 ppm, 3071 ppm, 2159 ppm, 1695 ppm, 1663 ppm, 656 ppm, and 2007 ppm (saturated zone), respectively (see table,).

BH #4 - NW Quadrant was sampled at 25', 30', 35', 40', 45', 50', and 55' bgs respectively.

Chloride analysis at 25', 30', 35', 40', 45', 50', and 55'bgs indicated concentrations at BH #4 were 1408 ppm, 1871 ppm, 512 ppm, 432 ppm, 560 ppm, 400 ppm, and 16 ppm, respectively (see table,).

Groundwater was encountered in BH #3 at 62' bgs with a chloride concentration of 2007 ppm.

Sincerely,

Jerry R. Brian, REM, REPA

Geologist

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88241





PHONE (325) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603

PHONE (505) 393-2326 - 101 E. MARLAND - HIDBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE, LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/20/06 Reporting Date: 09/21/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 09/21/06
Sampling Date: 09/19/06
Sample Type: SOIL & WATER
Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: HM

		CI CI
LAB NO.	SAMPLE ID	(ppm)
H11550-1	BH#3-57' BGS	*1663
H11550-2	BH#3-60' BGS	*656
H11550-3	BH#3-62' BGS	2007
H11550-4	BH#4-25' BG\$	*1408
H11550-5	BH#4-30' BGS	*1871
H11550-6	BH#4-35' BGS	*512
H11550-7	BH#4-40' BGS	*432
H11550-8	BH#4-45' BGS	*560
H11550-9	BH#4-50' BGS	*400
H11550-10	BH#4-55' BGS	*16
Quality Conf	rol	960
True Value	ac	1000
% Recovery		96
Relative Per	cent Difference	1,0

METHOD: Standard Methods 4500-CIB

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

Chemist Moreno

09-11-06 Date

H11550

PLEASE NOTE: Liability and Damages. Cardinal's (liability and clients exclusive remady for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analysis.

All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thinty (30) days after completion of the applicable service. In no event shall Cardinal be labely for incidental or consequential damages, including, without fimitation, business interruptions, loss of use, or loss of profits incurred by client, its substituties, affiliates or "Successors a rising out of or relatest to the performance of services hereundress of whether such claim is besed upon any of the above-stated reasons or otherwise.

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77	> - ARDINAL LABORATORIES. I		CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
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[†] Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

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



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN **4614 N. GRIMES HOBBS, NM 88240** FAX TO:

Receiving Date: 09/15/06 Reporting Date: 09/15/06

Project Owner: APACHE (APA-06-002)

Project Name: NEDU #527 Project Location: NOT GIVEN Analysis Date: 09/15/06 Sampling Date: 09/14/06

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: HM

		Cl					
LAB NO.	SAMPLE ID	(mg/kg)					
H11539-1	S091406-BH1-25	240					
H11539-2	S091406-BH1-30	112					
H11539-3	S091406-BH1-35	48					
H11539-4	S091406-BH2-25	4319					
H11539-5	S091406-BH2-30	1328					
H11539-6	S091406-BH2-35	128					
H11539-7	S091406-BH3-25	10157					
H11539-8	S091406-BH3-30	11436					
H11539-9	S091406-BH3-35	8237					
H11539-10	S091406-BH3-40	3071					
H11539-11	S091406-BH3-45	2159					
H11539-12	S091406-BH3-50	1695					
Quality Conf	rol	990					
True Value (True Value QC						
% Recovery		99					
Relative Per	elative Percent Difference						

	
METHOD: Standard Methods	4500-CIB

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

H11539

PLEASE NOTE: Liability and Damages. Cardinat's liability and client's exclusive remady 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 neglegance and any other cause whatsoever shall be deemed walved unless made in writing and received by Cardinal within thirty (30) days after completion of the (upblicubit) 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.

Q.

ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240 (916) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Hungry Horse LLC													ANALYSIS REQUEST											
Project Manager	Jerry Brian							a.								T	T		T	T	T	T			
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Samples - Ora - Bus - Other:		No No	<u> </u>		-			

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES. INC.

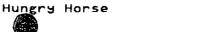
2111	Beechwood, Abilene, 1	TX 79603	101 East Marland, Hobbs, NM	8824
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(916) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2478										Page of															
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[†] Cardinal cannot accept verbal changes. Piezze fax written changes to 505-393-2476.





PHONE (325) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603

PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/06/06 Reporting Date: 09/07/06 Project Owner: APACHE

Project Name: APACHE NEDU #527
Project Location: APACHE NEDU # 527

Analysis Date: 09/07/06 Sampling Date: 09/06/06 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: HM

CIT LAB NO. SAMPLE ID (mg/kg)

H11511-1	E - WORKING PIT - 19' BGS	224
H11511-2	NE - 19' BGS	288
H11511-3	SE - 19' BGS	1935
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· · · · · · · · · · · · · · · · · · ·		
Quality Contro	ol .	980
True Value Q		1000
% Recovery		98
Relative Perce	ent Difference	1.0

METHOD: Standard Methods 4500-Cl'B

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

Chemist

09-07-06

Date

H11511

PLEASE NOTE: Listifity and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or but, shall be limited to the amount paid by ckern 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 thinty (30) days after completion of the repulsions. Including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidicaries, 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.

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ARDINAL LABORATORIES, INC.

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2111	Beechwood, Abilene, TX 79603	101 East Merland, Hobbs, NM 88

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[†] Cardinal cannot accept verbal changes. Please fex written changes to (325) 673-7020.



PHONE (325) 673-7001 - 2111 BEECHWOOD - ABILENE, TX 79603

PHONE (505) 393-2328 · 101 E. MARLAND · HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 09/05/06
Reporting Date: 09/06/06
Project Owner: APACHE
Project Name: NEDU #527
Project Location: LEA COUNTY

Analysis Date: 09/06/06 Sampling Date: 08/28/06 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: HM

C

LAB NO. SAMPLE ID (mg/kg) H11500-1 NW - 19' BGS 8557 H11500-2 SW - 19' BGS 8717 H11500-3 SW - WRK PIT - 19' BGS 5118 Quality Control 990 True Value QC 1000 % Recovery 99

METHOD: Standard Methods 4500-CIB

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

Relative Percent Difference

Chemist

09-06-06

1.0

Date

H11500

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or turt, shall be limited to the amount paid by client for anxilysos.

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 subsidicaries, 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.

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ARDINAL LABORATORIES, INC.

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PHONE (325) 873-7001 . 2111 BEECHWOOD . ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 08/17/06 Reporting Date: 08/18/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 08/18/06

Sampling Date: 08/08/06 & 08/16/06

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: AB

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LAB NO.	SAMPLE ID	(mg/kg)
H11451-1	C - 16' BGS	6158
H11451-2	SE - 16' BGS	5806
H11451-3	NW - 16' BGS	8797
H11451-4	SW - 16' BGS	37988
H11451-5	C WRK PIT - 14' BGS	176
H11451-6	SW WRK PIT - 17' BGS	9677
H11451-7	C - 17' BGS	112
H11451-8	SW - 17' BGS	10477
Quality Con	itrol	980
True Value		1000
% Recovery	/	98
Relative Pe	rcent Difference	2.0

METHOD: Standard Methods	4500-CIB

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

Chemist In gener

08-18-06 Date

H11451

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or text, shall be limited to the amount paid by client for anylyses. 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 one event start Cardinal be datable for incidental or consequential damages, including, without limitation, business intemplations, loss of use, or loss of profits incurred by client, its substantes, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such daim is based upon any of the above-stated reasons or otherwise.

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p.19



PHONE (325) 673-7001 - 2111 BEECHWOOD - ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HCIBBS, NM 88240

ANALYTICAL RESULTS FOR HUNGRY HORSE LLC ATTN: JERRY BRIAN P.O. BOX 1058 HOBBS, NM 88241 FAX TO: (505) 393-3386

Receiving Date: 08/07/06 Reporting Date: 08/08/06 Project Owner: APACHE Project Name: NEDU #527

Project Location: LEA COUNTY, NM

Analysis Date: 08/08/06

Sampling Date: 07/31/06 & 08/07/06

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: HM

Analyzed By: AB

		. CI
LAB NO.	SAMPLE ID	(mg/kg)
H11417-1	SE-10' BGS	12396
H11417-2	NE-10' BGS	17275
H11417-3	C-10' BGS	2255
H11417-4	C-12' BGS	272
H11417-5	SW-12' BGS	26872
H11417-6	NW-12' BGS	16315
Quality Con	troi	980
True Value	QC	1000
% Recovery	1	98
Relative Pe	rcent Difference	2.0

METHOD: Standard Methods 4500-CIB
NOTE: Analyses performed on 1:4 w.v aqueous extracts.

Chamist Woner

08-08-06 Date

H11417

PLEASE NOTE: Liability and Oarmages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or text, shall be limited to the amount paid by chent for analyses all claims, including those for negligence and any other cause whetecover shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after complication of the application service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of prints incurred by client, its substitutings, 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.

	2111 Beechwood, Abi (915) 673-7001 Fax													-	···········	_	ببسينين			-	أحمصنا	70 <u></u>	_0[<u> </u>	
Company Name:	Hungy Hase	 .					_			*41.58		<u></u>		177		T	ANAI	YSIS	RE	QUE	T		, , , , , , , , , , , , , , , , , , , 		
Project Manager:	Jery Brion				·	·		-			PO f			1	j	ľ	1) '		1 1			1	l r
Address: PQ.	Bax 1058						_	_	npal	ny:						ŀ	l	[. 1		ļ.
City: Hall		p: 9	182	41				AH	<u>n:</u>			<u> </u>		<u> </u>	<u> </u>	\	İ	1			ŀ			1	
Phone#: 396	3-6149				<u> </u>			Add	ires	5;				{		{	\	}			1				: Í
Fax#: 39	3-3386							City	V:				ŀ		1	Į .									
Project#:	Project Owne	ri ,	40	اعما	le			Sta	te:		Zīp;			ŀ		1	ł	{	ł	ŀ		1			ı
Project Name:	EDU #527		-					Pho	onė !	的 '				1		1	ļ	'							
Project Location:	Lea County							Fax	¢#;	., .				}	1	1		.				、.		·.	-
FOR LAB USE ONLY		7	T		MA	TRE	K		-	ES.	SAMPL	NG		1	1	l	1	1]		1		.	
LAB I.D.	Sample I.D.	(G)RAB OR (C)CAI	# CONTABERS	GROUNDWATER	SOF	큠	SLUDGE	OTHER:	ACID.	KE/COOL OTHER:	DATE	TIME	110									1			
+(1417-1	56-10' BGS	S	1		3	1			Ц		7-31-0								1			 			<u> </u>
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-3	C-10' BGS	#_	<u> </u>		4	↓_	_				7-31-06				4_	 	<u> </u>	 		L	ļ	ļ	ļ		
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Sampler Relinquished:	Dates	Received By:	Phone Result	U Yes U	NO Additional	Fax W:			-	
118	\$ 7-06 Time:	V:70	Pax Results REMARKS:	□ Yes □	No		<u>-i i </u>	<u></u>	····	
Relinquished by:		Received By: (Lab Stath)	₫					•		
	71m#3;4	Hope S. Wano	}							
Delivered By: (Circle One)	-	Sample Condition CHECKED BY: (Initials)	7	-		•			,	
Cample - UPS - Bus - Other:		Cool Infact (Initials) Yes (2 Yes								

[†] Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.

•			TRANS	ACTION	REPORT	_	NOV-09-2006	THU 06:44	ΑÌ
ŀ	FOR:							7.115	••
RI	ECEIVE								
DATE	START	SENDER	R	X TIME	PAGES	TYPE	NOTE	M#	D
NOV-09	9 06:35 AM	1 391 4585		9' 49"	. 20	RECEIVE	OK		





HUNGRY HORSE, LLC

ENVIRONMENTAL SERVICES

P.O. Box 1058 • HOBBS, NM 88241

CELL: 505.390.6149 • PHONE/FAX: 505.393.3386

DIRT WORK • On-Site Remediation • Soil Testing • Excavation

FAX MESSAGE

TO: De	~ Von Bouten
FAX NUMBER	1: 505-476-3462
FROM:	- Brian
DATE: 118	06TIME:
	70-10
NUMBER OF	PAGES TO FOLLOW:
	E ANY QUESTIONS CONCERNING THIS LEASE CONTACT:
PHONE/F	505.393.3386
CELL:	505.390.6149

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Ave., Artesia, NM 88210

1000 Rio Brazos Rd., 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

n C-101 Permit 11271

1220 S. St Francis Dr. Santa Fe, NM 87505

APPLICATION FOR PERMIT TO DRILL

APACHE CORP	Operator Name and Address APACHE CORP							
6120 S. Yale, Suite 1 Tulsa, OK 74136-4		API Number 30-025-37242						
Property Code 22503	Property Name NORTHEAST DRINKARD UNIT	Well No. 527						

Surface Location

7											ŀ
1	UL or Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County	-
-	M	10	213	37E	M	1310	S	330	W	Lea	

Proposed Pools

EUNICE; BLI-TU-DR, NORTH 22900

Work Type Well Type New Well OIL		Cable/Rotary	Lesse Type State	Ground Level Elevation 3464	
Multiple N	Proposed Depth 6925	Formation Drinkard	Contractor		

Proposed Casing and Cement Program

Туре	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	8.625	24	1300	575	i
Prod	7.825	5.5	17	6925	1100	

Proposed Blowout Prevention Program

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	Туре	Working Pressure	Test Pressure	Manufacturer
	Double Ram	2000	3000	

	There are conditions. See Attached.			
Date: 05/17/2005. Phone: 918-491-4900	Conditions of Approval:			
Title: Drilling Clerk	Approval Date: 05/18/2005 Expiration Date: 05/18/2006			
Electronically Signed By: Lana Williams	Title: Geologist			
and complete to the best of my knowledge and belief.	Electronically Approved By: Paul Kautz			
I hereby certify that the information given above is true	OIL CONSERVATION DIVISION			

WELL LOGS

Α .	PI number:	30-025-37	242	[.				
	OGRID:			APACHE (CORP		,	
			Property:	NORTHE/	ST DRINKA	ARD UNIT		# 527
			<u> </u>					
surface	ULSTR:	M	10	Ť	215	R	37E	1
•			1310	FSL	330	FWL		•
						-	•	
BH Loc	ULSTR:	М	10	T	215	R	37E	
			1310	FSL	330	FWL		•
	,							
Gr	ound Level:	3464	DF:	3474	KB:	3475		
	Datum:	KB			TD:	6862		
•								
			_		Completion	on Date: (1)	10/7/2005]
	Land:	STATE			Date Log	s Received:	12/5/2005	**Late
					Date Logs	Due in: (2)	10/27/2005	
Cor	ifidential:	NO				Date out:		
<u> </u>	Confidential	period: 90 Da	vs for State &	Fee, 1 Year i	for federal		-1	
		(1) is equal					*	
<u> </u>	Logs		Depth in		<u> </u>			
DSN/SDL		· · · · · · · · · · · · · · · · · · ·	200		Spectral De	nsity Dual S	paced Neutr	on .
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<u> </u>				l	l			- <u>" </u>
		OCD TOP	S				•	
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Rustler		1276	Strawn				· :	
Tansill			Atoka		<u> </u>	· · · · · · · · · · · · · · · · · · ·		
Yates		2637	Morrow					<u>-</u>
7R		2858						
T. Bow	ers Sd							ļ
B. Bow								
Queen		3431				·		
Penros	e		-					
Grayburg		3747						
San Andr	es	3979						
Glorieta		5163						
		- 0.00						
Tubb		6123				· · · · · · · · · · · · · · · · · · ·		
Drinkard		6440						
Abo		6722					· · · · · · · · · · · · · · · · · · ·	_ -
Wolfcam	<u> </u>		·					
11000011	·				-			
 								
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Apache Corporation 6120 S. Yale Ste 1500 Tulsa, OK 74136

NEDU # 527 Lea County New, Mexico

M-10-215-37e 1318/5 & 330/w 30.025-37242
1310/5 9 330/W
30.025-37242
<u> </u>

	• ·		100	<i>Ş</i> ?/	
451	4.51	3/4	(S) 1. 61 61 4	. EL	5.92
956	5.05	1	1.75	8.84	14.76
1283	3.27	3/4	1.31	4.29	19.05
1758	4.75	3/4	1.31	6.23	25.28
2233	4.75	2	3.50	16.63	41.91
2360	1.27	1 3/4	3.06	3.89	45.80
2487	1.27	1 1/2	2.63	3.33	49.13
2614	1.27	1	1.75	2.22	51.35
3090	4.76	1	1.75	8.33	59. 68
3598	5.08	1	1.75	8.89	68.57
4072	4.74	I	1.75	8.30	76.87
4547	4.75	1	1.75	8.31	85.18
5047	5.00	i	1.75	8.75	93.93
5526	4.79	1	1.75	8.38	102.31
5904	3.78	1 1/4	2.19	8.27 ⁻	110.58
6389	4.85	1	1.75	8.49	119.07
6862	4.73	1	1.75	8.28	127.35

Michael Roghair - General Manager

The attached instrument was acknowledged before me on the 19th day of 19th 2005 by Michael Roghair - General Manager, CapStar Drilling, L.P.

TAMME HUGGINS MY ∞MMISSION EXPIRES May 21, 2006 Notary Public Notary Public

KZ



State of New Mexico

Snergy, Minerals and Natural Resources Department

Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

1625 M. FRENCE DR., HOSBS, NM 68240

DISTRICT [

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 83210

DISTRICT III 1000 Rio Brazos Rd., Astec, NM 87410

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

DISTRICT IV 1220 S. ST. PRANCES DR., SANTA PR. NK 87505	WELL LOCATION AN	D ACREAGE DEDICATION PLAT	☐ AMENDED REPORT		
API Number	Pool Code	Pool Name	· · · · · · · · · · · · · · · · · · ·		
30-025-37242	22900	Eunice; Blinebry - Tubb - Drin	kard – North		
Property Code		Property Name	Well Number		
22503		NEDU			
OGRID No.	-	Operator Name	Elevation		
00873	APACHE	3464'			

Surface Location

-	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	M	10	21-S	37-E		1310	SOUTH	330	WEST	LEA

Bottom Hole Location If Different From Surface

JL or lot No. S	ection Townsi	nip Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation	Code Or	der No.			<u></u>	

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED

OR A NON-STANDARD UNIT HAS	BEEN APPROVED BY THE DIVISION
	OPERATOR CERTIFICATION I hereby cartify the the information contained herein is true and complete to the best of my knowledge and belief. Signature
GEODETIC COORDINATES NAD 27 NME Y=543842.7 N X=862437.1 E LAT.=32*29*22.72" N LONG.=103*09*28.47" W	Elaine Linton Printed Name Engineering Technician Title December 2, 2005 Date SURVEYOR CERTIFICATION I hareby certify that the well location shown on this plat was platted from field notes of actual surveys made by me ar under my supervison and that the same is true and correct to the best of my belief. MARCH 22, 2005 Date Surveys Real of Surveyor New York Surveyor New York Surveyor New York Surveyor New York Surveyor New York Surveyor New York Surveyor 12841

Submit 3 Copies To Appropriate District		New Mex			Form C-103 March 4, 2004
Office District 1	Energy, Minerals	and Natur	ral Resources	WELL API NO.	Warch 4, 2004
1625 N. French Dr., Hobbs, NM 88240	OIL CONSER'	UATIONII	DIVISION		0-025-37242
District II 1301 W. Grand Ave., Artesia, NM 88210	1220 Sout			5. Indicate Type o	f Lease
District III		e, NM 875		STATE	
1000 Rio Brazos Rd., Aztec, NM 87410	Sama I	C, 14141 0/2	705	6. State Oil & Gas	Lease No.
<u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM			•		İ
87505	•			,	
SUNDRY NOT	ICES AND REPORTS ON			7. Lease Name or	Unit Agreement Name
(DO NOT USE THIS FORM FOR PRO	OPOSALS TO DRILL OR T	TO DEEPE	N OR PLUG BACK		
TO A DIFFERENT RESERVOIR. US	E "APPLICATION FOR PI	ERMIT" (F	ORM C-101) FOR		NEDU
SUCH PROPOSALS.)				8. Well Number	
Type of Well: Oil Well	· ner	-			527
2. Name of Operator	101			9. OGRID Numbe	
APACHE CORPORATION					873
3. Address of Operator				10. Pool name or	
6120 S. YALE, STE. 1500				EUNICE; BLI-TU	DR, NORTH 22900
4. Well Location					
Unit Letter 1811		rom the _	Sline and	330feet	from the line
Section 10 T		lange	*		unty LEA
	11. Elevation (Show w	vhether Di	R, RKB, RT, GR, etc.)	
	5	3,4	64		
Pit or Below-grade Tank Application (For	pit or below-grade tank clos	ures, a form	C-144 must be attached	<u>d)</u>	
Pit Location: ULSectTwp			• .		nearest fresh water well
Distance from nearest surface water	Below-grade Tank Locat	ion UL	SectTwp	Rng;	
feet from theline and	feet from the	line			
12. Check Appropriate Box to Indicate	Nature of Notice, Report or	Other Data	l		JAN TO
NOTICE OF IN			S	UBSEQUENT RE	goratiof: Sogra
PERFORM REMEDIAL WORK	PLUG AND ABANDON	1 🗆	REMEDIAL WOR	к 💢	v ALTERING CASING ∑
	0	_			(E)
TEMPORARILY ABANDON	CHANGE PLANS		COMMENCE DRI	LLING OPNS.	PLUG AND
PULL OR ALTER CASING	MULTIPLE		CASING TEST AN	10 A	ABANDONMENT, O
TOLE ON ALTEN GASING	COMPLETION	ш.	CEMENT JOB	the test	, 8 d S₁ 11/
				É	. ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
OTHER:	•		OTHER: SPUD,	SURF. CSG., TD,	LOG PROD. CSG
13. Describe proposed or completed ope	erations (Clearly state all nerti	inent details	and give pertinent dates	including estimated da	LOG PROD. CSGACO
RULE 1103. For Multiple Comple	ctions: Attach wellbore diagram	m of propose	and brie permitting dates,	morading commette or	we of smitting any proposed work). SEE
9/2/05 DRILL & SURVEY TO 1283'. CAP	STAR RIG # 14.				
9/3/05- DRILL & SURVEY TO TD @ 6862	" DRILL - 987 - 1283 SURVE	V - 1283 = 74	S CIRC TO RUN 8 625 C	SC TOHTORINGI	IRFACE CSG. RIG UP & RUN 8.625
CSG 29 JTS. CIRC CSG SAFETY N	MEETING, CMT W/BJ CMT W	7/ 375 SX 35:0	65 POZ W/ 6% GEL + 2%	CACI+.25# CF = 125 B	ELS 12.7# SLURRY W/ 1.88 YIELD -
					LI6 SX CMT. TO PIT. WOC. CUT OFF
COCK, DART VALVE, = 500 LOW	. 2000 HIGH OKAY. TIH W/ B	IT#2 TOP OF	FCMT. @ 1200 FT. DRIL	LING CMT. PLUG. FL	CSG, PIPE RAMS, CHOKE, KELLY DAT COLLAR, FLOAT SHOE. DRLG.
7.875 FORMATOIN, 1283-1420'. St	URVEY @ 2487,= 1.5, SERV. R	IG, CHANGI	E OIL IN LIGHTPLANT. I	DRILL - 5716' - 5936'. C	CUT DRILLING LINE.=100', SURVEY @
5904' = 1.25. TRIP OUT HOLE FOR 2 JTS. DP, 50 JTS. DP INSTALL KS	LBIT CHANGE, PICK UP MOT SW'S & STRIPPING RUBBER	TOR, BIT,MA	KE UP SAME, BREAK C	IRC. FUNCTION TEST	TBOP. TIH BREAKING CIRC. @ DC &
WASH 90' TO BTM. / CIRC. BTMS	UP. DRILG. W/ BIT # 3 - 5936	' - 6130'. DRI	LL - 6700' - 6862'. LOST	350 PSI - CHECK SURI	FACE EQUIP, PUMP SOFTLINE, PRESS
INCREASE 7.5 MINITES. TO H. F.	IX AIR LINES, FOUND 7" CRA	ACK 2' ABO\	VE PIN ON JT # 160 LAY	DOWN SAME. SAFE	TY MEETING, RIG UP LOGGERS &
LOG. HALLIBURTON RAN COMI NEUTRON 6864 200. RUN 5.50"	J-55 & L-80 LT&C CSG. RIG D	OWN CSG C	ERULOG MICKOGUAK REW. CIRC CSG. BJ CM	D 6864 - 5000; SPECTR IT SHOE @6862 - FC @	6842 W/ 750 SX 50:50: POZ C W/ 10%
GEL +5% SALT + .125 #CF + 6 %	6 FI-52 = 325 BBLS 11.8# SLUR	RY W/ 2.44	YIELD & 400 SX 50:50 P	OZ C W/ 5% SALT + .6	% FL25 = 92 BBLS 14.2# SLURRY W/
1.29 YIELD - DISPLACE W/ 159 B RELEASE RIG 9/16/2005.	BLS 2% KCL WATER-PLUG I	BUMPED & I	HELD- CIRC 94 SX CMT	TO PIT. ND BOP. SE	I SLIPS. CUT OFF CSG.
I hereby certify that the information above is t constructed or closed according to NMOCI	rue and complete to the best of	my knowled	ige and belief. I further	certify that any pit of	below-grade tank has been/will be
1.) 00.	1			11	Li.
SIGNATURE Jana William	TITLE DRI	LLING CLE	RK II DATE	0/5/05	
Type or print name LANA WILLIAMS	E-mail address: lana	ı.williams@a	apachecorp.com	Tel	ephone No. 918-491-4980
This space for State use)	_			•	:
	OF TO	Al Ellin i	266 76.	ACT -	
APPPROVED BY Conditions of approval, if any:	TITLE	OLLUIVI E	INGINEERY DA	서는 1 7 2005	

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III

Date: 12/02/2005

Phone: (918)491-5362

State of New Mexico Energy, Minerals & Natural Resources



Submit to Appropriate District Office

1000 Rio Brazos	Rd., Azı	ec, NM 8	7410					ion Divi					-	5 Copi	
District IV 1220 S. St. Franc	is Dr., S	anta Fe. N	M 875	505	12			t. Francis VM 8750						AMENDED REPOR	
	ĭ				R ALI		•	AND AL		NZA'	TION T	ОТ	LI ANSP		
Operator nar	me and		QUI	-DII.	W ALL		ر سياريا د	OHDA	71101	² OC	GRID Nun	nber	MIGE	/	
Apache Co						•		00873							
6120 South Tulsa, OK			5 0 0					³ Reason for Filing Co. NW - 10/7/2005				ode/ Effec	tive Date		
⁴ APl Numbe			5 Pool	Name							7		ool Code		
30 -025-372		,			ebry - T	ubb -	Drinka	rd - Nortl	1			22	2900		
7 Property Co	de			erty Nam		** **					-	, v	Vell Numb	per 🗸	
II. 10 Sur	-f Y	ocation		tneast L	rinkard	Unit						52	41		
Ul or lot no.	Section		$\overline{}$	Range	Lot.Idn	Feet f	rom the	North/So	uth Line	Feet	from the	Fast	West line	County	
1 1	10	215	SILP.	37E	Locaton	1310		South	uur Line	330		Wes		Lea	
11 Bo	ttom I	lole Lo	catio	מ											
UL or lot no.	Section	Town	ship	Range	Lot Idn	Feet f	rom the	North/Sc	outh line	Feet	from the	East	West line	County	
12 Lse Code	13 Prod	ucing Meth Code	od	¹⁴ Gas Co		15 C-	129 Pen	mit Numbe	16	C-129	Effective	Date	¹⁷ C-	129 Expiration Date	
S	<u> P</u>	Code		10/07/	2005				l				<u> </u>		
III. Oil a	nd Ga	Trans	porte	rs					·					······	
Transporte OGRID	er	ľ	Tran	sporter N	lame		20	POD	²¹ O	/G		" P	OD ULST	R Location	
195739		Plains F	Pineli	ne I.P		_ -			0		Unit A	Sec 2	and Desc	•	
193139		Three A	llen	Center, 77002	333 Clay	/ <u> </u> _					NEDU	Centi	ral Tank	T 21S, R 37E l Tank Battery	
		nousto	u, 1 <i>1</i>	. //002											
20809					line Co.				G		Unit A	, Sec 2	2, T_21S,	R 37E	
		ZUI MIA Fort W	m Sti orth,	reet, Sui TX 761	te 3000 .02	-					NEDU	Centi	ral Tank	Battery	
024650		Dynerg 1000 La	y Mic ouisia	istream na. Suit	Services e 5800	•			G		Unit A NEDU	, Sec 2 E Cen	2, T 21S, tral Tan	R 37E k Battery	
		Housto	n, TX	77002						•		_, -, -, -			
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IV. Prod	uced V	Vater							·			19	- 32	e e	
²³ POD		24	POD	ULSTR	Location	and Des	scription					15	Sg	(g F)	
2264750			Unit	A, Sec 2	2, T 21S,	R 37E	, NEDI	U Central	Tank B	atter	у	<u> /ˈː.</u>		jj - : : : : : : : : : : : : : : : : : :	
V. Well	Comp	letion I	Data_							¬—,		<u>\</u>) ::::::::::::::::::::::::::::::::::::	·	
25 Spud Dat 09/02/2005	te ,	²⁶ R 10/07/20	eady l	Date	6862'	²⁷ TD		²⁸ PE 6843'	BTD	563	²⁹ Perforat 9 - 6687 '	ions	$\mathbb{T}_{Q_{Q_{0}}}$	³⁰ DHC, MC	
	le Size	0/0//20	1	32					D 10		9 - 000/		<u> </u>	· · · · · · · · · · · · · · · · · · ·	
	ne size				g & Tubin	g Size	_	•			ks Cement				
12-1/4"			8-	5/8"				1283' 575 sx / circ 116 sx				16 sx			
7-7/8"			5-	1/2"		6862'				1150 sx / TOC 208' CBL				' 208' CBL	
•															
,								٠.							
VI. Well	Test 1	Data				`-	l								
35 Date New		36 Gas I	Delive	ry Date	37	Test Da	ite	³⁸ T	est Lengt	h	³⁹ Tl	og. Pres	ssure	40 Csg. Pressure	
10/07/2005		10/07/		-		19/200	1	24 hrs	3			- ~		3	
41 Choke Siz	ze		⁴² Oil		4	3 Water	-		44 Gas			⁴⁵ AOI	;	46 Test Method	
		70			31			1030			-			Pumping	
47 I herehy cent	ify that	the niles	of the	Oil Con	servation '	Division	n have			UII	CONSED	VATT	ON DIVIS		
I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and					and			VIL	COLIGER	· AIR	VI DI 119	1011			
complete to the	complete to the best of my knowledge and belief.						.						_		
Signature:	رنظر	ame	Z	entor	_		-	Approved by:					 Q		
Printed name:	•							Title:		/		/	75	· ENGINEET	
	aine Li	ntop					.	···					TOOLE	IM P.	
Title: En	gineer	ing Tec	hnici	an			- 1	Approved Date: Approved Date: PETROLEUM ENGINEER PETROLEUM ENGINEER							
E-mail Address	s:					-			EC-0						
ela	ine.lin	ion@ap	elaine.linton@apachecorp.com								•				

•	• •			•								
Submit To Appropria)	State of New I	Mexi	co					Form C-1	05
State Lease - 6 copies Fee Lease - 5 copies	S	Er	nergy,	Minerals and N	atura	l Resource	s _			1	Revised June 10, 20)03
District I 1625 N. French Dr., 1	Hobbs, NM 88240			•				WELL API				-
District II 1301 W. Grand Aven	ue. Artesia, NM 882	10	0	il Conservation	Div	rision	-	30-025-37242 5. Indicate Type of Lease				\dashv
District []]			12	220 South St. F	ranci	is Dr.		STATE X FEE				
1000 Rio Brazos Rd. District IV				Santa Fe, NM	8750	05		State Oil &		se No.		
1220 S. St. Francis D			MDII	ETION REPORT	r A NI	D I OG	639	al and the second	mbi in T			#36E
1a. Type of Well:	OMPLETIO	1 OR RECU	WIFLI	ETION REPOR	AIN	DLOG		7. Lease Name				30 355
	LL 🕅 GAS W	ELL DR'	Υ□	OTHER				lortheast D				
b. Type of Comp	oletion:									•		-
	WORK DEE	_	G 🖂	DIFF.	rep							
2. Name of Operat	OVER	BA	CK	RESVR. OTH	ICK			B. Well No.	i			\dashv
•				,				527				
Apache Corpo 3. Address of Open								9. Pool name o	T Wildcat			\dashv
-		O Tulos OK	7412	6 4004				Tunice: Blin	ebry - T	ubb - Da	rinkard - North 2	229b
6120 South Ya	ale, Suite 150	U Tuisa, OK	7413	0-4224							THE COURT	7
	64 4	210		South			330	_		_ w	est ,	
Unit Letter	<u>M : 1</u>	Feet Fr	omThe_	Oodiii		_ Line and	000	}	eet From T	he		Line
Section	10		hip 21		Range	37E		МРМ	Le		County	
10. Date Spudded 09/02/2005	11. Date T.D. R 09/14/2005		Date Co /07/20	ompl. (Ready to Prod.)	1	13. Elevation 3464'	s (DF&	RKB, RT, GR	, etc.)	14. Elev.	. Casinghead	
15. Total Depth		Back T.D.		Multiple Compl. How			rvals	Rotary Tools		Cable	Tools	-
6862'	6843			ones?		Drilled	Bu 1	X		1		
19. Producing Inte	1	nletion - Ton B	<u> </u>			i			0. Was Di	rectional S	Survey Made	\dashv
Blinebry, Tubb		ipicuon - 10p, D	Juoni, I	anc					10 (12.72)	arectional o		
21. Type Electric a	ınd Other Logs Ru	n						22. Was Well	Cored			
SD/DSN, DLL/	MG							<u>No</u>				
23.			CA	SING RECO	RD (Report all	strin	gs set in v	vell)	S	NOIDE DULLED	
CASING SIZ. 8-5/8"	24#	GHT LB./FT.	1283	DEPTH SET	12-1/			CEMENTING 75 sx / cir			MOUNT PULLED	\dashv
5-1/2 ⁴	17#		6862		7-7/8			1150 sx / T				\dashv
					· · · · · · ·							\neg
			<u> </u>				ـــــــــــــــــــــــــــــــــــــــ					
24.		DOWNO.14		NER RECORD) ecr	DEEN	25.		TUBING I		PACKER SET	
SIZE	TOP	BOTTOM		SACKS CEMENT	SCI	REEN	SIZ. 2-7		6713'	SEI	PACKER SET	\dashv
·				 	\vdash		'	,,,	1 0, 10			\dashv
26. Perforation r	ecord (interval, siz	e, and number)			27.	ACID, SHO	T, FRA	CTURE, CE	MENT, S	QUEEZE	, ETC.	<u> </u>
BLINEBRY 5		1,5720-24,58	06-10	,72-75,5930-		PTH INTERV	۱L	AMOUNT A				\Box
TUBB 6134-		1-57 & 6329	-31' 2	JSPF		29 - 6020'					s gel+84k# 20/4	
DRINKARD						34 - 6331' 78 - 6687'					ls gel+82k# 20/₄ ls gel+62k# 20/₄	
30				DD	-	JCTION		ZUUUyais	1.5761101	, 42Nyai	S GOINDENH ZUI	+0 31
Date First Product	ion	Production Me	thod (F	lowing, gas lift, pump			mp)	Well Status	(Prod. or .	SHATE INFO	- 300 	
10/07/2005	,	Pumping					7,	Produci	h i	0,6	. 47	
Date of Test	Hours Tested	Choke Siz	<u> </u>	Prod'n For	Oil	- Bbl	Gas	- MCF	্ৰ ্ Water -	Rbl	Gas - Oil Ratio	
10/19/2005	24 hrs	CHOKE 312	L	Test Period	70		1	030	31	3. 4. 6.	14714)
				L	1,0							
Flow Tubing Press.	Casing Pressure	Calculated Hour Rate		Oil - Bbl.	t	Gas - MCF		/ater - Bbl.	Oil	Gravity - ,	AРI - (Сот.)	
									40	0.0		
29. Disposition of	L Gas (Sold, used fo	r fuel, vented, et	c.)	1		······································			Test Witn			
Sold	· -	· ·							Apache	Corpora	ation	
30. List Attachmen		100 0 101										
Logs, Deviation			n hath	sides of this form a	c true	and complete	to the	host of mil-	owlados	and haliar		_
· rereby cert	yy inai ine injori /	imion snown (m voin		s irue	ини сотрічіє	io ine	uesi uj my KM	owieusje (mu venej		
Sionature /	Elawi	Linton)	Printed	·•	•	Tiele f		Tooler:	iolon	Data 10/00/0	ام
Signature (pour	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•	Name Elaine Lir	เเปท		ine t	Engineering	ı ecnni	СІАП	Date 12/02/20	uua
E-mail Address	s elaine.lin	ton@apachec	orp.co	m				1	1			

INSTRUCTION



This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southe	astern New Mexico	Northwe	Northwestern New Mexico				
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn "B"				
T. Salt	T. Strawn	T. Kirtland-Fruitland	T. Penn. "C"				
B. Salt	T. Atoka	T. Pictured Cliffs	T. Penn. "D"				
T. Yates 2637'	T. Miss	T. Cliff House	T. Leadville				
T. 7 Rivers 2858'	T. Devonian	T. Menefee	T. Madison				
T. Queen 3431'	T. Silurian	T. Point Lookout	T. Elbert				
T. Grayburg 3747'	T. Montoya	T. Mancos	T. McCracken				
T. San Andres 3979'	T. Simpson	T. Gallup	T. Ignacio Otzte				
T. Glorieta 5182'	T. McKee	Base Greenhorn	T. Granite				
T. Paddock	T. Ellenburger	T. Dakota	T.				
T. Blinebry 5646'	T. Gr. Wash	T. Morrison	T				
T.Tubb 6123'	T. Delaware Sand	T.Todilto	T.				
T. Drinkard 6458'	T. Bone Springs	T. Entrada	T.				
T. Abo 6722'	T. Rustler 1275'	T. Wingate	T.				
T. Wolfcamp	T.	T. Chinle	T.				
T. Penn	T.	T. Permian	T.				
T. Cisco (Bough C)	T.	T. Penn "A"	T.				
			OIL OR GAS				

	•		SANDS OR ZONES
No. 1, from	to		to
,		RTANT WATER SANDS	
Include data on rate of w	ater inflow and elevation to w	hich water rose in hole.	
		feet	
No. 2, from	to	feet	
		feet	
·		CORD (Attach additional sheet if	

From	То	Thickness In Feet	Lithology	From	То	Thickness In Feet	Lithology
							·
	-						
						<u> </u>	
	,					,	

District I

1625 N. French Dr., Hobbs, NM 98240

District II

1301 W. Grend Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St Frencis Dr., Senta Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505



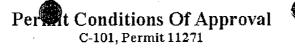
WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Name	Pool Code
30-025-37242	EUNICE;BLI-TU-DR, NORTH	22900
Property Code 22503	Property Name NORTHEAST DRINKARD UNIT	Well No 527
0 GRID No.	Operator Name	Elevation
873	APACHE CORP	3464

Surface And Bottom Hole Location

UL or Lot	Section	Township	Range	Lot Idn	Feet From	H/S Line	Feet From	E/W Line	County
M	10	21S	37E	M	1310	S		W	Lea
9	Dedicated Acres Joint or Infill		Consoli	dation Code	Order No.				

	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Electronically Signed By: Lana Williams Title: Drilling Clerk Date: 05/17/2005 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.
X	Surveyed By: GARY EIDSON Date of Survey: 03/22/2005 Certificate Number: 12641



Operator: APACHE CORP, 873

Well: NORTHEAST DRINK ARD UNIT #527

OCD Reviewer	Condition
PKAUTZ	Re-seeding mixture will must be approved or authorized by surface owner
PKAUTZ	Notice is to be given to the OCD prior to construction of the pit(s)
BPKAUIZ :	Pit construction and closure must satisfy all requirements of O.C.D. Rule 19.15.2.50, and the Pit and Below-Grade Tank Guidelines

9/22/2006 · EVERTA WITHUS. SUCES. - DASES OF TVL 476-1947 0 61:16 -0 4:01-MILL CIMFAN /201-394-2050 . 7:39- Jenny Brya - Husam How & APALAGE NEDU 527 30-025-37242 J10M215,37€ CW CONTAMINATION 505- 780-6149 MIKE GRIFFIN -09:13 · Jame Bries -LP PIT CLOSURE - DON'T WANT DO LEAVE DPEN VENDIE BOOD LOS-DWA -Sw Women. SE come DH-3-60' Ce-656 D WO 62' # 2007 Bono -0 20' O Modument Draw CHAO TO NE