

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, 2006 Additional 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

6E

**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

3/24/2008

**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 analytics

**Follow Up Flag:** Follow up

**Flag Status:** Red

**Attachments:** NEDU #527 analytics0014.gif; NEDU #527 analytics0001.gif; NEDU #527 analytics0014.gif; NEDU #527 analytics0001.gif; NEDU #527 analytics0002.gif; NEDU #527 analytics0003.gif; NEDU #527 analytics0004.gif; NEDU #527 analytics0005.gif; NEDU #527 analytics0006.gif; NEDU #527 analytics0007.gif; NEDU #527 analytics0008.gif; NEDU #527 analytics0009.gif; NEDU #527 analytics0010.gif; NEDU #527 analytics0011.gif; NEDU #527 analytics0012.gif; NEDU #527 analytics0013.gif

Hi Glen,

Here are the analytics for the Apache NEDU #527.

Thanks,  
JB

3/24/2008

**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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control		960
True Value QC		1000
% Recovery		96
Relative Percent Difference		1.0

**METHOD:** Standard Methods

4500-C1-B

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

**Chemist**

Date \_\_\_\_\_

**H11550**

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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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (ppm)
H11550-1	BH#3-57' BGS	*1663
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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
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H11550-10	BH#4-55' BGS	*16
Quality Control		960
True Value QC		1000
% Recovery		96
Relative Percent Difference		1.0

METHOD: Standard Methods	4500-CIB
--------------------------	----------

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

Chemist

Date \_\_\_\_\_

H11550

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**CARDINAL 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**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page \_\_\_\_ of \_\_\_\_

Company Name: <u>Hungry Horse, LLC</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																					
Project Manager: <u>Q. Brim</u>		P.O. #:																							
Address: <u>P.O. Box 1058</u>		Company:																							
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88241</u>		Attn:																							
Phone #: <u>390-6149</u> Fax #: <u>393-3386</u>		Address:																							
Project #: _____ Project Owner: <u>Apache</u>		City:																							
Project Name: <u>WEDU #527</u>		State: _____ Zip: _____																							
Project Location: <u>Lea Cnty</u>		Phone #: _____																							
Sampler Name: <u>Q. Brim</u>		Fax #: _____																							
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(GRAB OR (C)OMP.)	# CONTAINERS	MATRIX			PRESERV.			SAMPLING														
					GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL											OTHER:	DATE	TIME
	H11SSO-1	BH #3 - 57' BBS	B				X																	9/19/06	9 AM
	-2	BH #3 - 60' BBS	B				X																		
	-3	BH #3 - 62' BBS			X																				
	-4	BH #4 - 25' BBS	B				X																		
	-5	" - 30' "					X																		
	-6	" - 35' "					X																		
	-7	" - 40' "					X																		
	-8	" - 45' "					X																		
	-9	" - 50' "					X																		
<small>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</small>																									
<small>Terms and Conditions: Interest will be charged on all accounts from 30 days past due at the rate of 24% per annum from the original date of billing, and all costs of collections, including attorney's fees.</small>																									
Sampler Relinquished: <u>Q. Brim</u>		Date: <u>9/20/06</u>	Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS:																
Time: <u>1:35 PM</u>		Time: _____		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																			
Relinquished By: _____		Received By: (Lab Staff) <u>Stefan</u>																							
Date: _____		Time: _____		Sample Condition		CHECKED BY: (Initials)																			
Delivered By: (Circle One)				Cool Intact																					
Sampler - UPS - Bus - Other:				<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No																			

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



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page \_\_\_\_ of \_\_\_\_

[illegible]

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





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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:

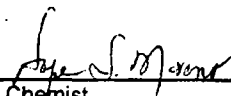
Receiving Date: 09/15/06  
Reporting Date: 09/15/06  
Project Owner: APACHE (APA-06-002)  
Project Name: NEDU #527  
Project Location: NOT GIVEN

Analysis Date: 09/15/06  
Sampling Date: 09/14/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control	990
	True Value QC	1000
	% Recovery	99
	Relative Percent Difference	1.0

METHOD: Standard Methods 4500-Cl<sup>-</sup>B

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

  
Chemist

09-18-06  
Date

H11539

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Page 1 of 2

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

**CARDINAL LABORATORIES, INC.**

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(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**Page 2 of 2

Company Name: <u>Hungry Horse LLC</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																						
Project Manager: <u>Jerry Brian</u>		P.O. #:																								
Address:		Company:																								
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88241</u>		Attn:																								
Phone #: <u>505-390-6149</u> Fax #:		Address:																								
Project #: <u>APA-06-002</u> Project Owner: <u>APACHE</u>		City:																								
Project Name: <u>NR04 #527</u>		State: Zip:																								
Project Location:		Phone #:																								
Sampler Name: <u>JOHN GOOD</u>		Fax #:																								
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(GRAB OR (COMP. # CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER:	DATE	TIME												
	<u>H11539-11</u>	<u>5091406-BH3-4T</u>	<u>X</u>	<u>1</u>			<u>X</u>						<u>9-14</u>	<u>5:00</u>												
	<u>-12</u>	<u>-BH3-50</u>	<u>X</u>	<u>1</u>			<u>X</u>						<u>9-14</u>	<u>5:20</u>												
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Sampler Relinquished:		Date:	Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS:																	
		Time:			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																			
Relinquished By:		Date:	Received By: (Lab Staff)																							
		Time:																								
Delivered By: (Circle One)			Sample Condition		CHECKED BY:																					
Sampler - UPS - Bus - Other:			Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		(Initials)																					

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



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

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

[illegible]

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

Hope S. Moreno  
Chemist

09-07-06  
Date

H11511

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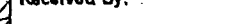
**(325) 673-7001 Fax (325) 673-7020 (505) 393-2326 Fax (505) 393-2476**

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page        of       

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the services. All claims, including those for negligence and any other cause whatsoever that be deemed related arises under a billing and rendered by Cardinal within 90 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, 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 claims are based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished By: 		Date: 9-6-06 Time: 3:20		Received By: _____		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished By: _____		Date: 9/6/06 Time: 3:20		Received By: (Lab Staff) 		REMARKS: _____	
Delivered By: (Circle One) Sample: <u>UPS</u> - Bus - Other: _____		Sample Condition Temp. Intact? Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Checked By: _____ (Initials)			

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Analysis Date: 09/06/06  
Sampling Date: 08/28/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: NF  
Analyzed By: HM

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

09-26-26  
Date

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# **CARDINAL LABORATORIES, INC.**

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## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page \_\_\_\_ of \_\_\_\_

Company Name: <b>Hungary Horse</b>				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>												
Project Manager: <b>John Brown</b>				P.O. #:																
Address: <b>PO Box 1058</b>				Company:																
City: <b>Hobbs</b>		State: <b>NM</b>		Zip: <b>88240</b>		Attn:														
Phone #: <b>390-6149</b>		Fax #: <b>393-3386</b>		Address:		City:														
Project #: _____		Project Owner: <b>Apache</b>		State:		Zip:														
Project Name: <b>WED 4 # 527</b>				Phone #:																
Project Location: <b>Lea County</b>				Fax #:																
Sampler Name: <b>FB</b>																				
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING												
Lab I.D.	Sample I.D.	(GRAB OR COMP.)	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME						
H11500-1	NW-19 BBS	↓				X							8/28/06		X					
-2	SW-19 BBS	↓				X							8/28/06		X					
-3	SW-Wrk Pit-19 BBS	↓				X							8/28/06		X					

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Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: <b>John Brown</b>		Date: <b>8/5/06</b>	Received By: _____		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished By: _____		Time: <b>1:50pm</b>	Received By: <b>(Lab Staff)</b>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No
Delivered By: (Circle One)		Date: _____	Checked By: _____		REMARKS:
Sample: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Bus <input type="checkbox"/> Other:		Time: _____	Sample Condition Temp, °C Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

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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

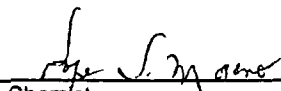
Receiving Date: 08/17/06  
Reporting Date: 08/18/06  
Project Owner: APACHE  
Project Name: NEDU #527  
Project Location: LEA COUNTY, NM

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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control	980
	True Value QC	1000
	% Recovery	98
	Relative Percent Difference	2.0

METHOD: Standard Methods 4500-Cl<sup>-</sup>B

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

  
Chemist

08-18-06  
Date

H11451

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# 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 \_\_\_\_ of \_\_\_\_

Company Name: <u>Hungry Horse</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>														
Project Manager: <u>J.B.</u>		P.O. #:																
Address: <u>P.O. Box 1058</u>		Company:																
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88241</u>		Attn:																
Phone #: <u>390-6149</u> Fax #: <u>393-3386</u>		Address:																
Project #: _____ Project Owner: <u>H Apache</u>		City:																
Project Name: <u>NED4 F527</u>		State: _____ Zip: _____																
Project Location: <u>lea cutin</u>		Phone #:																
Sampler Name: <u>J.B.</u>		Fax #:																
FOR LAB USE ONLY																		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.		SAMPLING								
				GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME				
<u>W1451</u>	<u>C-16' BBS</u>	<u>8</u>				<u>X</u>							<u>8/8/06</u>					
<u>-2</u>	<u>SE-16' BBS</u>												<u>↓</u>					
<u>-3</u>	<u>NW-16' BBS</u>												<u>↓</u>					
<u>-4</u>	<u>SW-16' BBS</u>												<u>↓</u>					
<u>-5</u>	<u>C Work Pit - 14' BBS</u>												<u>8/16/06</u>					
<u>-6</u>	<u>SW Work Pit - 17' BBS</u>												<u>↓</u>					
<u>-7</u>	<u>C - 17' BBS</u>												<u>↓</u>					
<u>-8</u>	<u>SW - 17' BBS</u>												<u>↓</u>					

PLEASE NOTE: Liability and Damages: Cardinal's liability and claim'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 services. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, 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 rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 20% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished: <u>Brim</u>		Date: <u>8/16/06</u>	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:		Time: <u>12:30 PM</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One)		Date:	Received By: (Lab Staff)	REMARKS:	
Sampler: <u>UPS</u> - Bus - Other:		Time:	<u>Burton</u> <u>Cook</u>		
			Sample Condition	CHECKED BY: (Initials)	
			Cool Intact		
			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
			<input type="checkbox"/> Yes <input type="checkbox"/> No		

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



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

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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control		980
True Value QC		1000
% Recovery		98
Relative Percent Difference		2.0

METHOD: Standard Methods	4500-CIB
--------------------------	----------

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

Chemist

Date \_\_\_\_\_

H11417

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.


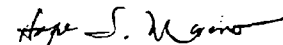


### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Hungry Horse										ANALYSIS REQUEST												
Project Manager: Jerry Brown										BILL TO PO #:												
Address: P.O. Box 1058										Company:												
City: Hobbs State: NM Zip: 88241										Attn:												
Phone #: 390-6149										Address:												
Fax #: 393-3386										City:												
Project #: Project Owner: Apache										State: Zip:												
Project Name: WEDU #527										Phone #:												
Project Location: Lea County										Fax #:												
FOR LAB USE ONLY						MATRIX		PRES.		SAMPLING												
LAB I.D.	Sample I.D.	(GRAB OR COMPOSITE)	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE/COOL	OTHER:	DATE	TIME								
H11417-1	SG-10' BGS	G				X							7-31-06									
-2	WE-10' BGS												7-31-06									
-3	C-10' BGS												7-31-06									
-4	C-12' BGS												8-7-06	2:05pm								
-5	SW-12' BGS												8-7-06	2:06pm								
-6	WS-12' BGS												8-7-06	2:07pm								

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other causes whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or subcontractors 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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished By: 		Date: 8-7-06	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Additional Fax #: <input type="checkbox"/> Yes <input type="checkbox"/> No
Time: 3:04				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished By:		Date: 08-09-06	Received By: (Lab Staff)	REMARKS:	
Time: 3:04					
Delivered By: (Circle One) Sample - UPS - Bus - Other:		Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No		CHECKED BY: (Initials)	

† Cardinal cannot accept verbal changes. Please fax written changes to 815-673-7020.



# **CARDINAL LABORATORIES, INC.**

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240  
(815) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page \_\_\_\_ of \_\_\_\_

Company Name: <u>Hungry Horse</u>		Project Manager: <u>John Brian</u>		Billed To: <u>PO #:</u>	
Address: <u>P.O. Box 1058</u>		City: <u>Halls</u> State: <u>NM</u> Zip: <u>88241</u>		Company:	
Phone #: <u>390-6149</u>		Fax #: <u>393-3386</u>		Attn:	
Project #: _____		Project Owner: <u>Apache</u>		Address:	
Project Name: <u>WEDU #527</u>		Project Location: <u>Lea County</u>		City:	
State: _____		Zip: _____		Phone #: _____	
Fax #: _____		State: _____		Zip: _____	

LAB I.D.	Sample I.D.	FOR LAB USE ONLY	CONTAINERS	MATRIX					PRES.		SAMPLING		DATE	TIME
				GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER	ACID	ICE / COOL	OTHER			
H11417-1	SG-10' BGS												7-31-06	
-2	NE-10' BGS												7-31-06	
-3	C-10' BGS												7-31-06	
-4	C-12' BGS												8-7-06 2:05pm	
-5	SW-12' BGS												8-7-06 2:05pm	
-6	NE-12' BGS												8-7-06 2:07pm	

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising under this contract or for, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated remedies or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished By: <u>[Signature]</u>		Date: <u>8-7-06</u>	Received By: _____	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Additional Fax #: _____
Relinquished By: <u>[Signature]</u>		Time: <u>3:04</u>	Received By: (Lab Staff) _____	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	REMARKS:
Delivered By: (Circle One) <u>Sample - UPS - Bus - Other:</u>		Date: <u>08-07-06</u>	Time: <u>3:04</u>	Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
		CHECKED BY: _____ (Initials)			

† 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., Artesia, NM 88210

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410

**District IV**1220 S. St. Francis Dr., Santa Fe, NM  
87505State 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**

Operator Name and Address APACHE CORP 6120 S. Yale, Suite 1500 Tulsa, OK 74136-4224		OGRID Number 873
		API Number 30-025-37242
Property Code 22503	Property Name NORTHEAST DRINKARD UNIT	Well No. 527

**Surface Location**

UL or Lot M	Section 10	Township 21S	Range 37E	Lot Lbr M	Feet From 1310	N/S Line S	Feet From 330	E/W Line W	County Lea
----------------	---------------	-----------------	--------------	--------------	-------------------	---------------	------------------	---------------	---------------

**Proposed Pools**

EUNICE;BLI-TU-DR,NORTH 22900
------------------------------

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

**Proposed Casing and Cement Program**

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

**Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	2000	3000	

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: Drilling 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 IV1220 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-102

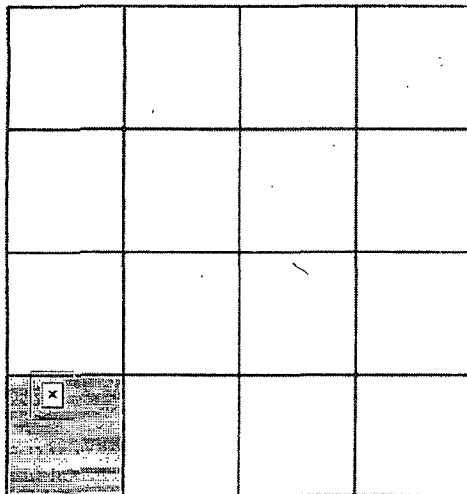
Permit 11271

## WELL LOCATION AND ACREAGE DEDICATION PLAT

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

## Surface And Bottom Hole Location

UL or Lot M	Section 10	Township 21S	Range 37E	Lot Idn M	Feet From 1310	N/S Line S	Feet From 330	E/W Line W	County Lea
Dedicated Acres 40		Joint or Infill		Consolidation 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.

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
PRAUTZ	Re-seeding mixture will must be approved or authorized by surface owner
PRAUTZ	Notice is to be given to the OCD prior to construction of the pit(s)
PRAUTZ	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  
Office  
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., Santa Fe, NM  
87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
March 4, 2004

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO. 30-025-37242
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEB <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name NEDU
8. Well Number 527
9. OGRID Number 873
10. Pool name or Wildcat EUNICE, BLI-TU-DR, NORTH 22900

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR 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 ☒ Gas Well ☐ Other ☐

2. Name of Operator  
APACHE CORPORATION

3. Address of Operator  
6120 S. YALE, STE. 1500

4. Well Location  
Unit Letter 10M : 1310 feet from the S line and 330 feet from the W line  
Section 10 Township 21S Range 37E NMPM 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      Twp      Rng      Pit type      Depth to Groundwater      Distance from nearest fresh water well     

Distance from nearest surface water      Below-grade Tank Location UL      Sect      Twp      Rng      ;

     feet from the      line and      feet from the      line

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:  
PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: ☐

SUBSEQUENT REPORT OF:  
REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: SPUD, SURF. CSG., TD, LOG, PROD. CSG. ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE 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 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/ 375 SX 35.65 POZ W/ 6% GEL + 2% CACI + .25# CF = 125 BBLs 12.7# 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 OFF 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. DRLG. 7.875 FORMATOIN, 1283-1420'. SURVEY @ 2487 = 1.5. SERV. RIG. CHANGE OIL IN LIGHTPLANT. DRILL - 5716' - 5936'. 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. T I H BREAKING CIRC. @ DC & 2 JTS. DP, 50 JTS. DP INSTALL KSW'S & STRIPPING RUBBER WASH 90' TO BTM. / CIRC. BTMS UP. DRLG. W/ BIT # 3 - 5936' - 6130'. DRILL - 6700' - 6862'. LOST 350 PSI - CHECK SURFACE EQUIP, PUMP SOFTLINE, PRESS INCREASE 7.5 MINUTES. T O H FIX AIR LINES, FOUND 7" CRACK 2' ABOVE PIN ON IT # 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 & L-80 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% FL25 = 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.

I 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 Lana Williams TITLE DRILLING CLERK II DATE 10/5/05

Type or print name LANA WILLIAMS

E-mail address: lana.williams@apachecorp.com

Telephone No. 918-491-4980

This space for State use)

APPROVED BY [Signature] TITLE PETROLEUM ENGINEER DATE OCT 17 2005  
Conditions of approval, if any:



# WELL LOGS

API number:	30-025-37242		
OGRID:		Operator:	APACHE CORP
		Property:	NORTHEAST DRINKARD UNIT # 527

surface	ULSTR:	M	10	T	21S	R	37E
			1310	FSL		330	FWL

BH Loc	ULSTR:	M	10	T	21S	R	37E
			1310	FSL		330	FWL

Ground Level:	3464	DF:	3474	KB:	3475
Datum:	KB			TD:	6862

Land: **STATE**

Completion Date: (1) **10/7/2005**  
 Date Logs Received: **12/5/2005** \*\*Late  
 Date Logs Due in: (2) **10/27/2005**

Confidential:	NO			Date out:	
---------------	----	--	--	-----------	--

Confidential period: 90 Days for State & Fee, 1 Year for federal

Date Due in: (1) is equal to Completion Date (1) + 20 days

Logs	Depth interval		
DSN/SDL	200	6864	Spectral Density Dual Spaced Neutron
DLL/MSFL	5000	6864	Dual Laterolog Micro Spherically Focused Log

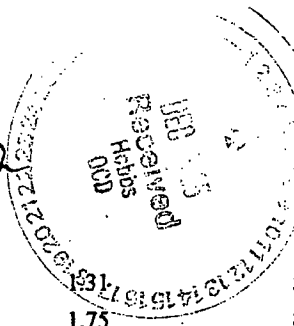
## OCD TOPS

Rustler	1276	Strawn		
Tansill		Atoka		
Yates	2637	Morrow		
7R	2858			
T. Bowers Sd				
B. Bowers Sd				
Queen	3431			
Penrose				
Grayburg	3747			
San Andres	3979			
Glorieta	5163			
Tubb	6123			
Drinkard	6440			
Abo	6722			
Wolfcamp				

Apache Corporation  
6120 S. Yale Ste 1500  
Tulsa, OK 74136

NEDU # 527  
Lea County New, Mexico

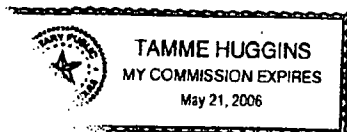
M-10-215-37e  
1310/S & 330/W  
30.025-37242



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

  
Michael Roghair - General Manager

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



  
Notary Public



## DISTRICT I

1626 N. FERNCH DR., HOBBES, NM 88240

## DISTRICT II

1306 W. GRAND AVENUE, ARTESIA, NM 88210

## DISTRICT III

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 Department

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-37242	Pool Code 22900	Pool Name Eunice; Blinebry - Tubb - Drinkard - North
Property Code 22503	Property Name NEDU	Well Number 527
OGRID No. 00873	Operator Name APACHE CORPORATION	Elevation 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

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 or Infill	Consolidation Code	Order No.						

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

	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.   Signature  Elaine Linton Printed Name  Engineering Technician Title  December 2, 2005 Date	
	<b>SURVEYOR CERTIFICATION</b>  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.  MARCH 22, 2005 Date Surveyed  Signature & Seal of Professional Surveyor GARY E. EIDSON NEW MEXICO 05110479 Certified No. GARY EIDSON 12641	

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-104  
Revised June 10, 2003

Submit to Appropriate District Office  
5 Copies

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

<sup>1</sup> Operator name and Address Apache Corporation 6120 South Yale, Suite 1500 Tulsa, OK 74136-4224		<sup>2</sup> OGRID Number 00873
<sup>4</sup> API Number 30 -025-37242		<sup>3</sup> Reason for Filing Code/ Effective Date NW - 10/7/2005
<sup>5</sup> Pool Name Eunice; Blinebry - Tubb - Drinkard - North	<sup>6</sup> Pool Code 22900	
<sup>7</sup> Property Code 22503	<sup>8</sup> Property Name Northeast Drinkard Unit	<sup>9</sup> Well Number 527

II. <sup>10</sup> 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	21S	37E		1310	South	330	West	Lea

<sup>11</sup> 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
<sup>12</sup> Lse Code S	<sup>13</sup> Producing Method Code P	<sup>14</sup> Gas Connection Date 10/07/2005	<sup>15</sup> C-129 Permit Number	<sup>16</sup> C-129 Effective Date	<sup>17</sup> C-129 Expiration Date				

III. Oil and Gas Transporters

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

IV. Produced Water

<sup>23</sup> POD 2264750	<sup>24</sup> POD ULSTR Location and Description Unit A, Sec 2, T 21S, R 37E, NEDU Central Tank Battery
------------------------------	--

V. Well Completion Data

<sup>25</sup> Spud Date 09/02/2005	<sup>26</sup> Ready Date 10/07/2005	<sup>27</sup> TD 6862'	<sup>28</sup> PBD 6843'	<sup>29</sup> Perforations 5629 - 6687'	<sup>30</sup> DHCMC
<sup>31</sup> Hole Size 12-1/4"	<sup>32</sup> Casing & Tubing Size 8-5/8"	<sup>33</sup> Depth Set 1283'	<sup>34</sup> Sacks Cement 575 sx / circ 116 sx		
7-7/8"	5-1/2"	6862'	1150 sx / TOC 208' CBL		

VI. Well Test Data

<sup>35</sup> Date New Oil 10/07/2005	<sup>36</sup> Gas Delivery Date 10/07/2005	<sup>37</sup> Test Date 10/19/2005	<sup>38</sup> Test Length 24 hrs	<sup>39</sup> Tbg. Pressure	<sup>40</sup> Csg. Pressure
<sup>41</sup> Choke Size 70	<sup>42</sup> Oil	<sup>43</sup> Water 31	<sup>44</sup> Gas 1030	<sup>45</sup> AOF	<sup>46</sup> Test Method Pumping
<sup>47</sup> I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Elaine Linton</i>			OIL CONSERVATION DIVISION		
Printed name: Elaine Linton			Approved by: <i>[Signature]</i> Title: <b>PETROLEUM ENGINEER</b>		
Title: Engineering Technician			Approval Date: DEC 07 2005		
E-mail Address: elaine.linton@apachecorp.com					
Date: 12/02/2005		Phone: (918)491-5362			

Submit To Appropriate District Office State Lease - 6 copies Fee Lease - 5 copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	<b>State of New Mexico</b> <b>Energy, Minerals and Natural Resources</b>  <b>Oil Conservation Division</b> <b>1220 South St. Francis Dr.</b> <b>Santa Fe, NM 87505</b>	<b>Form C-105</b> Revised June 10, 2003					
		WELL API NO. <b>30-025-37242</b>					
		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>					
		State Oil & Gas Lease No.					
<b>WELL COMPLETION OR RECOMPLETION REPORT AND LOG</b>							
1a. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		7. Lease Name or Unit Agreement Name <b>Northeast Drinkard Unit</b>					
b. Type of Completion: NEW <input checked="" type="checkbox"/> WORK <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG <input type="checkbox"/> DIFF. WELL OVER BACK RESVR. <input type="checkbox"/> OTHER							
2. Name of Operator <b>Apache Corporation</b>		8. Well No. <b>527</b>					
3. Address of Operator <b>6120 South Yale, Suite 1500 Tulsa, OK 74136-4224</b>		9. Pool name or Wildcat <b>Eunice; Blinebry - Tubb - Drinkard - North 22900</b>					
4. Well Location Unit Letter <b>M</b> <b>1310</b> Feet From The <b>South</b> Line and <b>330</b> Feet From The <b>West</b> Line Section <b>10</b> Township <b>21S</b> Range <b>37E</b> NMPM Lea County							
10. Date Spudded <b>09/02/2005</b>	11. Date T.D. Reached <b>09/14/2005</b>	12. Date Compl. (Ready to Prod.) <b>10/07/2005</b>					
		13. Elevations (DF& RKB, RT, GR, etc.) <b>3464'</b>					
14. Elev. Casinghead							
15. Total Depth <b>6862'</b>	16. Plug Back T.D. <b>6843'</b>	17. If Multiple Compl. How Many Zones? <b>3</b>					
		18. Intervals Drilled By <b>X</b>					
		Rotary Tools <b>X</b>					
		Cable Tools					
19. Producing Interval(s), of this completion - Top, Bottom, Name <b>Blinebry, Tubb, Drinkard</b>		20. Was Directional Survey Made <b>No</b>					
21. Type Electric and Other Logs Run <b>SD/DSN, DLL/MG</b>		22. Was Well Cored <b>No</b>					
<b>23. CASING RECORD (Report all strings set in well)</b>							
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED		
8-5/8"	24#	1283'	12-1/4"	575 sx / circ 116 sx			
5-1/2"	17#	6862'	7-7/8"	1150 sx / TOC 208' CBL			
<b>24. LINER RECORD</b>			<b>25. TUBING RECORD</b>				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-7/8"	6713'	
26. Perforation record (interval, size, and number) <b>BLINEBRY 5629-32,82-84,5720-24,5806-10,72-75,5930-32 &amp; 6017-20' 2 JSPF</b> <b>TUBB 6134-38,93-97,6251-57 &amp; 6329-31' 2 JSPF</b> <b>DRINKARD 6578-82,6614-18,54-58 &amp; 6683-87' 2 JSPF</b>				27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL    AMOUNT AND KIND MATERIAL USED <b>5629 - 6020'    2000gals 15%HCl, 41kgals gel+84k# 20/40 sd</b> <b>6134 - 6331'    2000gals 15%HCl, 40kgals gel+82k# 20/40 sd</b> <b>6578 - 6687'    2000gals 15%HCl, 42kgals gel+62k# 20/40 sd</b>			
<b>28. PRODUCTION</b>							
Date First Production <b>10/07/2005</b>		Production Method (Flowing, gas lift, pumping - Size and type pump) <b>Pumping</b>			Well Status (Prod. or Shut-in) <b>Producing</b>		
Date of Test <b>10/19/2005</b>	Hours Tested <b>24 hrs</b>	Choke Size	Prod'n For Test Period	Oil - Bbl <b>70</b>	Gas - MCF <b>1030</b>	Water - Bbl <b>31</b>	Gas - Oil Ratio <b>14714</b>
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.) <b>40.0</b>	
29. Disposition of Gas (Sold, used for fuel, vented, etc.) <b>Sold</b>						Test Witnessed By <b>Apache Corporation</b>	
30. List Attachments <b>Logs, Deviation Report, C-102, C-104</b>							
31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief							
Signature <i>Elaine Linton</i>		Printed Name <b>Elaine Linton</b>		Title <b>Engineering Technician</b>		Date <b>12/02/2005</b>	
E-mail Address <b>elaine.linton@apachecorp.com</b>							

# 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

Southeastern New Mexico		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.....

No. 2, from.....to.....

No. 3, from.....to.....

No. 4, from.....to.....

## IMPORTANT WATER SANDS

**Include data on rate of water inflow and elevation to which water rose in hole.**

No. 1, from.....to.....feet.....  
 No. 2, from.....to.....feet.....  
 No. 3, from.....to.....feet.....

**LITHOLOGY RECORD** (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology

Submit 3 Copies To Appropriate District Office

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., Santa Fe, NM

87505

State of New Mexico  
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-103

March 4, 2004

WELL API NO.

30-025-37242

5. Indicate Type of Lease

STATE ☒ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

NEDU

8. Well Number

527

9. OGRID Number

873

10. Pool name or Wildcat

EUNICE; BLI-TU-DR, NORTH 22900

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR 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 ☒ Gas Well ☐ Other ☐

2. Name of Operator

APACHE CORPORATION

3. Address of Operator

6120 S. YALE, STE. 1500

4. Well Location

Unit Letter 10M : 1310 feet from the S line and 330 feet from the VS line  
Section 10 Township 21S Range 37E NMPM 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      Twp      Rng      Pit type      Depth to Groundwater      Distance from nearest fresh water well     

Distance from nearest surface water      Below-grade Tank Location UL      Sect      Twp      Rng      ;

     feet from the      line and      feet from the      line

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☒

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: SPUD, SURF. CSG., TD, LOG, PROD. CSG. ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE 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 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/ 375 SX 35.65 POZ W/ 6% GEL + 2% CACI+.25# CF = 125 BBLSTZ.7# SLURRY W/ 1.88 YIELD - TAIL W/ 200 SX CLASS C + 2% CACI+.125# CF = 48 BBLSTZ.7# SLURRY W/ 1.35 YIELD - PLUG BUMPED & HELD - CIRC 116 SX CMT. TO PIT. WOC. CUT OFF 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. DRLG. 7.875 FORMATOIN, 1283-1420'. SURVEY @ 2487. = 1.5. SERV. RIG. CHANGE OIL IN LIGHTPLANT. DRILL - 5716' - 5936'. 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. T I H BREAKING CIRC. @ DC & 2 JTS. DP, 50 JTS. DP INSTALL KSW'S & STRIPPING RUBBER WASH 90' TO BTM. / CIRC. BTMS UP. DRILG. W/ BIT # 3 - 5936' - 6130'. DRILL - 6700' - 6862'. LOST 350 PSI - CHECK SURFACE EQUIP, PUMP SOFTLINE. PRESS INCREASE 7.5 MINUTES. 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 & L-80 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 BBLSTZ. 11.8# SLURRY W/ 2.44 YIELD & 400 SX 50:50 POZ C W/ 5% SALT + .6% FL25 = 92 BBLSTZ. 14.2# SLURRY W/ 1.29 YIELD - DISPLACE W/ 159 BBLSTZ 2% KCL WATER- PLUG BUMPED & HELD- CIRC 94 SX CMT TO PIT. ND BOP. SET SLIPS. CUT OFF CSG. RELEASE RIG 9/16/2005.

I 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 NMOC guidelines ☐ , a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Lana Williams TITLE DRILLING CLERK II DATE 10/5/05

Type or print name LANA WILLIAMS

E-mail address: lana.williams@apachecorp.com

Telephone No. 918-491-4980

This space for State use)

APPROVED BY [Signature]

TITLE PETROLEUM ENGINEER

DATE 10/7/2005

Conditions of approval, if any:

# WELL LOGS

API number:	30-025-37242		
OGRID:		Operator:	APACHE CORP
		Property:	NORTHEAST DRINKARD UNIT # 527

surface	ULSTR:	M	10	T	21S	R	37E
			1310	FSL		330	FWL

BH Loc	ULSTR:	M	10	T	21S	R	37E
			1310	FSL		330	FWL

Ground Level:	3464	DF:	3474	KB:	3475
Datum:	KB			TD:	6862

Land: STATE

Completion Date: (1) 10/7/2005  
 Date Logs Received: 12/5/2005 \*\*Late  
 Date Logs Due in: (2) 10/27/2005

Confidential:	NO			Date out:	
---------------	----	--	--	-----------	--

Confidential period: 90 Days for State & Fee, 1 Year for federal  
 Date Due in: (1) is equal to Completion Date (1) + 20 days

Logs	Depth interval		
DSN/SDL	200	6864	Spectral Density Dual Spaced Neutron
DLL/MSFL	5000	6864	Dual Laterolog Micro Spherically Focused Log

## OCD TOPS

Rustler	1276	Strawn		
Tansill		Atoka		
Yates	2637	Morrow		
7R	2858			
T. Bowers Sd				
B. Bowers Sd				
Queen	3431			
Penrose				
Grayburg	3747			
San Andres	3979			
Glorieta	5163			
Tubb	6123			
Drinkard	6440			
Abo	6722			
Wolfcamp				



Apache Corporation  
6120 S. Yale Ste 1500  
Tulsa, OK 74136

NEDU # 527  
Lea County New, Mexico

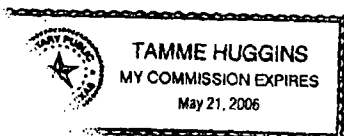
M-10-215-378  
1310/S & 330/W  
30.025- 37242

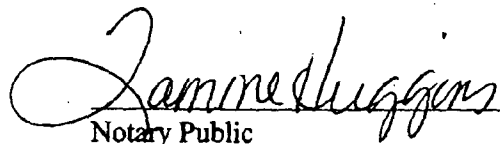



451	4.51	3/4	5.92	5.92
956	5.05	1	8.84	14.76
1283	3.27	3/4	1.31	19.05
1758	4.75	3/4	1.31	25.28
2233	4.75	2	3.50	41.91
2360	1.27	1 3/4	3.06	45.80
2487	1.27	1 1/2	2.63	49.13
2614	1.27	1	1.75	51.35
3090	4.76	1	1.75	59.68
3598	5.08	1	1.75	68.57
4072	4.74	1	1.75	76.87
4547	4.75	1	1.75	85.18
5047	5.00	1	1.75	93.93
5526	4.79	1	1.75	102.31
5904	3.78	1 1/4	2.19	110.58
6389	4.85	1	1.75	119.07
6862	4.73	1	1.75	127.35

  
Michael Roghair - General Manager

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



  
Notary Public  


## DISTRICT I

1625 N. FRENCH DR., BOHRS, NM 88240

## DISTRICT II

1304 W. GRAND AVENUE, ARTESIA, NM 88210

## DISTRICT III

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 Department

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

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-37242	Pool Code 22900	Pool Name Eunice; Blinbry - Tubb - Drinkard - North
Property Code 22503	Property Name NEDU	Well Number 527
OGRID No. 00873	Operator Name APACHE CORPORATION	Elevation 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

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 or Infill	Consolidation Code	Order No.

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

	<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=543842.7 N X=862437.1 E</p> <p>LAT.=32°29'22.72" N LONG.=103°09'28.47" W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Elaine Linton</i> Signature</p> <p>Elaine Linton Printed Name</p> <p>Engineering Technician Title</p> <p>December 2, 2005 Date</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>MARCH 22, 2005 Date Surveyed</p> <p><i>GARY EIDSON</i> Signature &amp; Seal of Professional Surveyor</p> <p>NEW MEXICO GARY EIDSON 343/105 05110479 Certified No. GARY EIDSON 12641</p>	

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☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

<sup>1</sup> Operator name and Address <b>Apache Corporation</b> <b>6120 South Yale, Suite 1500</b> <b>Tulsa, OK 74136-4224</b>		<sup>2</sup> OGRID Number <b>00873</b>
<sup>4</sup> API Number <b>30 -025-37242</b>		<sup>3</sup> Reason for Filing Code/ Effective Date <b>NW - 10/7/2005</b>
<sup>5</sup> Pool Name <b>Eunice; Blinberry - Tubb - Drinkard - North</b>	<sup>6</sup> Pool Code <b>22900</b>	
<sup>7</sup> Property Code <b>22503</b>	<sup>8</sup> Property Name <b>Northeast Drinkard Unit</b>	<sup>9</sup> Well Number <b>527</b>

II. <sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
<b>M</b>	<b>10</b>	<b>21S</b>	<b>37E</b>		<b>1310</b>	<b>South</b>	<b>330</b>	<b>West</b>	<b>Lea</b>

III. <sup>11</sup> 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
<sup>12</sup> Lse Code <b>S</b>	<sup>13</sup> Producing Method Code <b>P</b>	<sup>14</sup> Gas Connection Date <b>10/07/2005</b>	<sup>15</sup> C-129 Permit Number	<sup>16</sup> C-129 Effective Date	<sup>17</sup> C-129 Expiration Date				

IV. Oil and Gas Transporters

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

V. Produced Water

<sup>23</sup> POD <b>2264750</b>	<sup>24</sup> POD ULSTR Location and Description <b>Unit A, Sec 2, T 21S, R 37E, NEDU Central Tank Battery</b>
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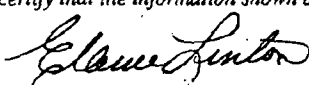
VI. Well Completion Data

<sup>25</sup> Spud Date <b>09/02/2005</b>	<sup>26</sup> Ready Date <b>10/07/2005</b>	<sup>27</sup> TD <b>6862'</b>	<sup>28</sup> PBDT <b>6843'</b>	<sup>29</sup> Perforations <b>5629 - 6687'</b>	<sup>30</sup> DHC/MC
<sup>31</sup> Hole Size	<sup>32</sup> Casing & Tubing Size	<sup>33</sup> Depth Set	<sup>34</sup> Sacks Cement		
<b>12-1/4"</b>	<b>8-5/8"</b>	<b>1283'</b>	<b>575 sx / circ 116 sx</b>		
<b>7-7/8"</b>	<b>5-1/2"</b>	<b>6862'</b>	<b>1150 sx / TOC 208' CBL</b>		

VII. Well Test Data

<sup>35</sup> Date New Oil <b>10/07/2005</b>	<sup>36</sup> Gas Delivery Date <b>10/07/2005</b>	<sup>37</sup> Test Date <b>10/19/2005</b>	<sup>38</sup> Test Length <b>24 hrs</b>	<sup>39</sup> Tbg. Pressure	<sup>40</sup> Csg. Pressure
<sup>41</sup> Choke Size <b>70</b>	<sup>42</sup> Oil	<sup>43</sup> Water <b>31</b>	<sup>44</sup> Gas <b>1030</b>	<sup>45</sup> AOF	<sup>46</sup> Test Method <b>Pumping</b>

<sup>47</sup> I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Elaine Linton</i>		OIL CONSERVATION DIVISION	
Printed name: <b>Elaine Linton</b>		Approved by: <i>[Signature]</i>	
Title: <b>Engineering Technician</b>		Title: <b>PETROLEUM ENGINEER</b>	
E-mail Address: <b>elaine.linton@apachecorp.com</b>		Approval Date: <b>DEC 07 2005</b>	
Date: <b>12/02/2005</b>	Phone: <b>(918)491-5362</b>		

Submit To Appropriate District Office State Lease - 6 copies Fee Lease - 5 copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	<b>State of New Mexico</b> <b>Energy, Minerals and Natural Resources</b>  <b>Oil Conservation Division</b> <b>1220 South St. Francis Dr.</b> <b>Santa Fe, NM 87505</b>	<b>Form C-105</b> Revised June 10, 2003
		WELL API NO. <b>30-025-37242</b>
		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
		State Oil & Gas Lease No.
<b>WELL COMPLETION OR RECOMPLETION REPORT AND LOG</b>		
1a. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER <input type="checkbox"/>		7. Lease Name or Unit Agreement Name <b>Northeast Drinkard Unit</b>
b. Type of Completion: NEW <input checked="" type="checkbox"/> WORK <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG <input type="checkbox"/> DIFF. WELL OVER BACK RESVR. <input type="checkbox"/> OTHER <input type="checkbox"/>		
2. Name of Operator <b>Apache Corporation</b>		8. Well No. <b>527</b>
3. Address of Operator <b>6120 South Yale, Suite 1500 Tulsa, OK 74136-4224</b>		9. Pool name or Wildcat <b>Eunice; Blinebry - Tubb - Drinkard - North 22900</b>
4. Well Location Unit Letter <b>M</b> <b>1310</b> Feet From The <b>South</b> Line and <b>330</b> Feet From The <b>West</b> Line Section <b>10</b> Township <b>21S</b> Range <b>37E</b> NMPM Lea County		
10. Date Spudded <b>09/02/2005</b>	11. Date T.D. Reached <b>09/14/2005</b>	12. Date Compl. (Ready to Prod.) <b>10/07/2005</b>
13. Elevations (DF& RKB, RT, GR, etc.) <b>3464'</b>		14. Elev. Casinghead
15. Total Depth <b>6862'</b>	16. Plug Back T.D. <b>6843'</b>	17. If Multiple Compl. How Many Zones? <b>3</b>
18. Intervals Drilled By <b>X</b>		Rotary Tools <b>X</b>
19. Producing Interval(s), of this completion - Top, Bottom, Name <b>Blinebry, Tubb, Drinkard</b>		20. Was Directional Survey Made <b>No</b>
21. Type Electric and Other Logs Run <b>SD/DSN, DLL/MG</b>		22. Was Well Cored <b>No</b>
<b>23. CASING RECORD (Report all strings set in well)</b>		
CASING SIZE	WEIGHT LB/FT.	DEPTH SET
<b>8-5/8"</b>	<b>24#</b>	<b>1283'</b>
<b>5-1/2"</b>	<b>17#</b>	<b>6862'</b>
24. LINER RECORD		25. TUBING RECORD
SIZE	TOP	SIZE
		<b>2-7/8"</b>
BOTTOM	SACKS CEMENT	DEPTH SET
		<b>6713'</b>
26. Perforation record (interval, size, and number) <b>BLINEBRY 5629-32,82-84,5720-24,5806-10,72-75,5930-32 &amp; 6017-20' 2 JSPF</b> <b>TUBB 6134-38,93-97,6251-57 &amp; 6329-31' 2 JSPF</b> <b>DRINKARD 6578-82,6614-18,54-58 &amp; 6683-87' 2 JSPF</b>		27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL    AMOUNT AND KIND MATERIAL USED <b>5629 - 6020'    2000gals 15% HCl, 41kgals gel+84k# 20/40 sd</b> <b>6134 - 6331'    2000gals 15% HCl, 40kgals gel+82k# 20/40 sd</b> <b>6578 - 6687'    2000gals 15% HCl, 42kgals gel+62k# 20/40 sd</b>
<b>28. PRODUCTION</b>		
Date First Production <b>10/07/2005</b>		Production Method (Flowing, gas lift, pumping - Size and type pump) <b>Pumping</b>
		Well Status (Prod. or Shut-in) <b>Producing</b>
Date of Test <b>10/19/2005</b>	Hours Tested <b>24 hrs</b>	Choke Size
		Prod'n For Test Period
		Oil - Bbl <b>70</b>
		Gas - MCF <b>1030</b>
		Water - Bbl <b>31</b>
		Gas - Oil Ratio <b>14714</b>
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate
		Oil - Bbl
		Gas - MCF
		Water - Bbl
		Oil Gravity - API - (Corr.) <b>40.0</b>
29. Disposition of Gas (Sold, used for fuel, vented, etc.) <b>Sold</b>		Test Witnessed By <b>Apache Corporation</b>
30. List Attachments <b>Logs, Deviation Report, C-102, C-104</b>		
31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief		
Signature 	Printed Name <b>Elaine Linton</b>	Title <b>Engineering Technician</b>
E-mail Address <b>elaine.linton@apachecorp.com</b>		Date <b>12/02/2005</b>

## 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

Southeastern New Mexico		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 ..... No. 3, from ..... to .....  
No. 2, from ..... to ..... No. 4, from ..... to .....

## IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ..... to ..... feet  
No. 2, from ..... to ..... feet  
No. 3, from ..... to ..... feet

## LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology

**VonGonten, Glenn, EMNRD**

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**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:

	Depth (bgs)	Chlorides (ppm)
NW Quadrant (BH # 4)	25'	1408
	30'	1871
	35'	512
	40'	432
	45'	560
	50'	400
	55'	16
NE Quadrant (BH #1)	19'	288
	25'	240
	30'	112
Center	17'	112
SE Quadrant (BH #2)	19'	1935
	25'	4319
	30'	1328
	35'	128
SW Wrk. Pit	19'	5118
SE Wrk. Pit	19'	224
SW Quadrant (BH #4)	19'	8717
	25'	10,157
	30'	11,436
	35'	8237
	40'	3071
	45'	2159
	50'	1695
	57'	1663
	60'	656
	62'	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**

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**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

3/24/2008



**AP - 068**

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

**2006/2007**

**AP - 068**

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

**2006/2007**

**AP - 068**

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

**2006/2007**

**VonGonten, Glenn, EMNRD**

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**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

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**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

3/24/2008

# **APACHE ENERGY CORPORATION**

NEDU # 527

API#30-025-37242

## **STAGE 1 ABATEMENT PLAN (AP068)**

UL-M OF SECTION 10 T21S R37E

LATITUDE: N32° 29.387'

LONGITUDE: 103° 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: [Harold.Swain@USA.ApacheCorp.com](mailto:Harold.Swain@USA.ApacheCorp.com)

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](mailto: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 yds<sup>3</sup> 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<sup>-</sup>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		Cl
7/31/06	NE	10' BGS	17275
9/6/06	NE	19' BGS	288
7/31/06	NW	12' BGS	16315
8/8/06	NW	16' BGS	8797
9/6/06	NW	19' BGS	8557
7/31/06	C	10' BGS	2255
7/31/06	C	12' BGS	272
8/8/06	C	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<sup>-</sup>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-ClB).

## **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 data 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 of the investigation report requirements.

- a. *Descriptions of the site, including a site map, and of site history including the nature 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) surface-water 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.

c.

*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.

d.

*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 an adequate site investigation.*

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

**AP - 068**

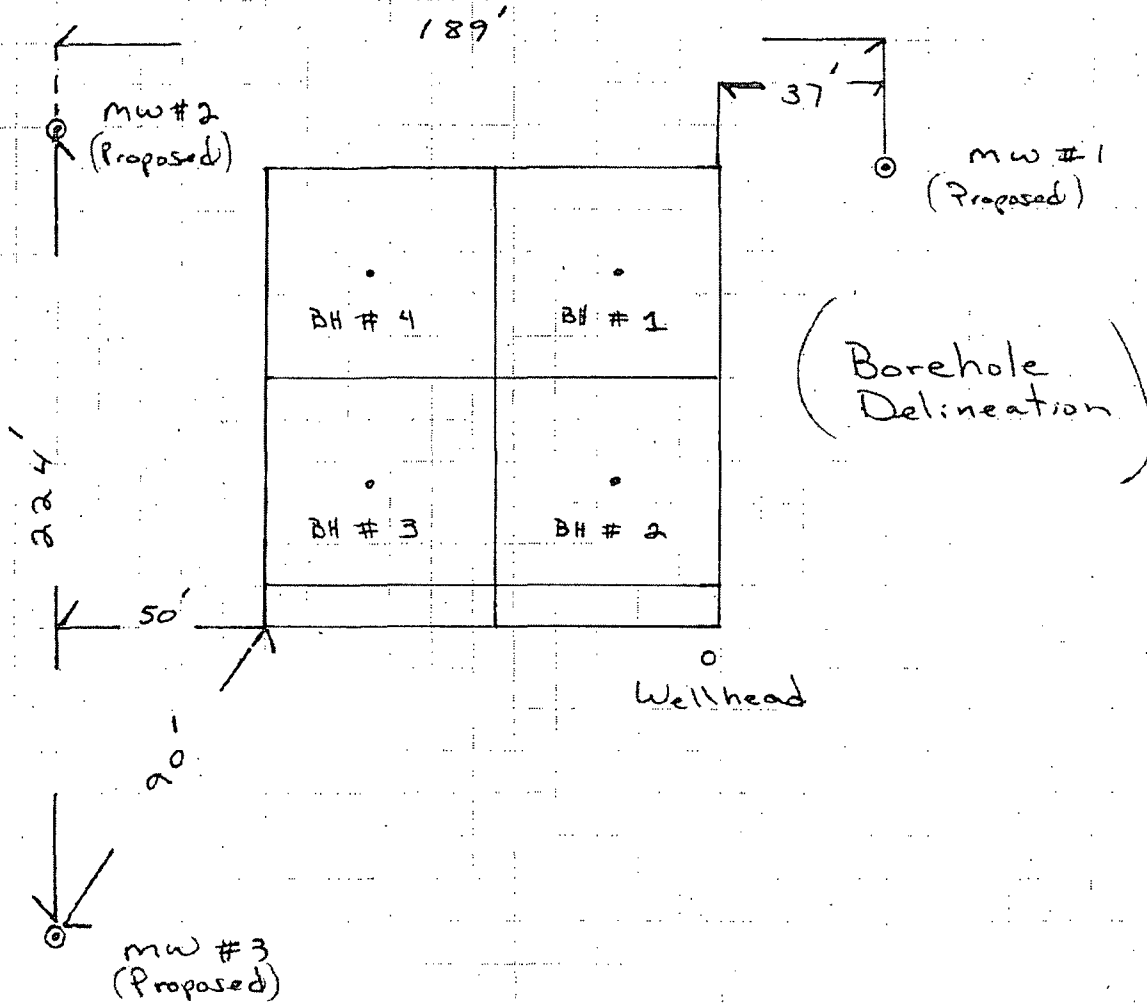
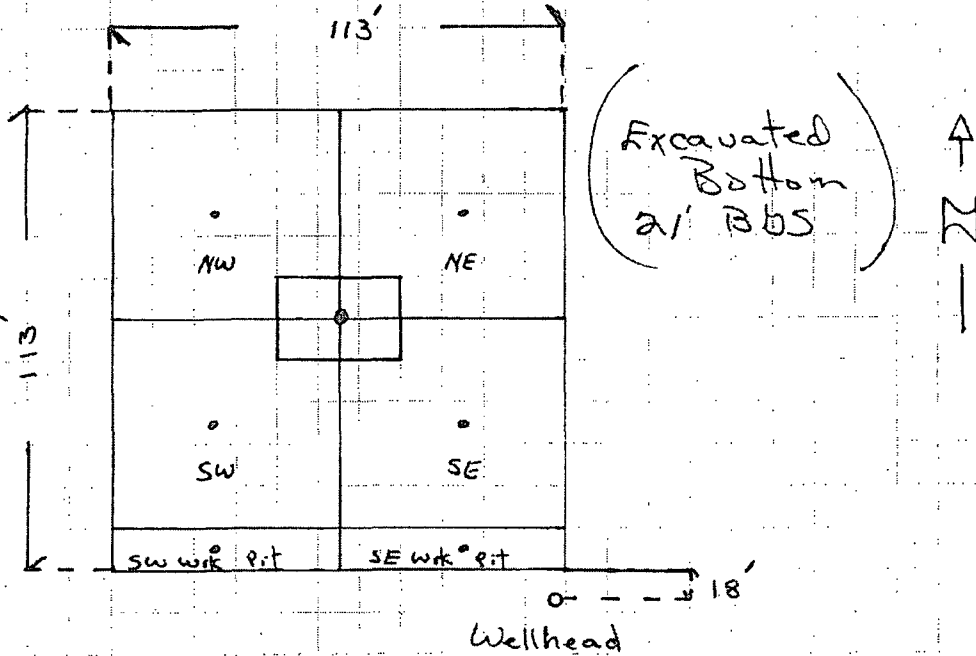
**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

**2006/2007**

APACHE - NED 4 #527

SITE SAMPLING MAP





# 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** rec'd @ 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.

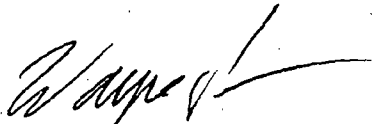
Apache's Stage 1 Abatement Plan must specifically meet all of the requirements specified in OCD Rule 19E.3, including, but not limited to, a site investigation work plan and monitoring program that will enable it to characterize the chloride release using an appropriate number of isoconcentration maps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

Mr. Harold Swain  
November 29, 2006  
Page 2

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

Apache should submit one paper copy with and an electronic copy on CD of all future workplans and/or reports. If you have any questions, please contact Glenn von Gonten of my staff at (505) 476-3488.

Sincerely,



Wayne Price  
Environmental Bureau Chief

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

PS Form 3811, August 2001 Domestic Return Receipt	
102595-01-M-2509	
2. Article Number (Transfer from service label) 7001 1940 0004 3929 4029	
1. Article Addressed to: MR HAROLD SWAIN APACHE CORPORATION P.O. BOX 849 WINK, TX 79789	
or on the front if space permits. ■ Attach this card to the back of the mailpiece, so that we can return the card to you. ■ Print your name and address on the reverse item 4 if Restricted Delivery is desired. ■ Complete items 1, 2, and 3. Also complete	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Service Type <input type="checkbox"/> Insured Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail	
D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
B. Received by (Printed Name) X [Signature] C. Date of Delivery 12-5-06	
A. Signature X [Signature] Agent <input type="checkbox"/> Addressee <input checked="" type="checkbox"/>	
COMPLETE THIS SECTION ON DELIVERY	



RECEIVED

NOV 27 2006

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

November 6, 2006

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 Gonten:

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<sup>-</sup>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		Cl <sup>-</sup>
7/31/06	NE	10' BGS	17275
9/6/06	NE	19' BGS	288
7/31/06	NW	12' BGS	16315
8/8/06	NW	16' BGS	8797
9/6/06	NW	19' BGS	8557
7/31/06	C	10' BGS	2255
7/31/06	C	12' BGS	272
8/8/06	C	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) 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<sup>-</sup>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.

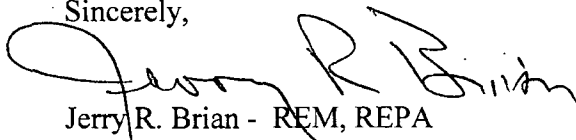
Chloride analysis at 25', 30', 35', 40', 45', 50', 57', 60', and 62' bgs indicated concentrations at BH #3 were 10,157 ppm, 11,436 ppm, 8237 ppm, 3071 ppm, 2159 ppm, 1695 ppm, 1663 ppm, 656 ppm, and 2007 ppm (saturated zone), respectively (see table,).

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

# RECEIVED

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

NOV 27 2008

Form C-14  
Revised October 10, 2007

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

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

## Release Notification and Corrective Action

### OPERATOR

Name of Company - Apache Corporation  
Address - P.O. Box 849 Wink, TX 79789  
Facility Name - NEDU 527 API # - 30-025-37242  
Contact - Harold Swain  
Telephone No. - 505-390-4368  
Facility Type - Producing Well

☒ Initial Report ☐ Final Report

Surface Owner Mineral Owner Lease No.

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	1310 Feet from the	South Line	330 Feet from the	West Line
	10	21S	37E				

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
Source of Release - compromised pit liner	Date and Hour of Occurrence unknown	Date and Hour of Discovery 7/19/06 7:30 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson / Glen Von Goten	
By Whom? Jerry Brian - Hungry Horse Environmental	Date and Hour	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. 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.\*

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 liner. 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 ml liner 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.

Signature: <i>J. Brian</i> Printed Name: <i>Jerry Brian</i> Title: <i>Environmental Manager - Hungry Horse Environmental</i> E-mail Address: <i>j.brian@hungerhorse.net</i> Date: <i>11/6/06</i> Phone: <i>505-390-6149</i>	<p><b>OIL CONSERVATION DIVISION</b></p> <p>Approved by District Supervisor: <i>[Signature]</i> Approval Date: <i>11.9.06</i> Expiration Date: <i>2.9.07</i></p> <p>Conditions of Approval:</p> <p>Attached <input type="checkbox"/></p>
---	---

DN# 111



# ARDINAL LABORATORIES

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

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

## RECEIVED

NOV 27 2006

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

Oil Conservation Division  
1220 S. St. Francis Drive  
NM 87505

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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control		960
True Value QC		1000
% Recovery		96
Relative Percent Difference		1.0

METHOD: Standard Methods

4500-Cl<sup>-</sup>B

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

  
Chemist

09-21-06  
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 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.

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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control		990
True Value QC		1000
% Recovery		99
Relative Percent Difference		1.0

**METHOD:** Standard Methods

4500-CI-B

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

Chemist

Date \_\_\_\_\_

H11539

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of 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: 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

[illegible]

METHOD: Standard Methods	4500-CIB
--------------------------	----------

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

Walter S. McDermott  
Chemist

09-07-06  
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 analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



# ARDINAL LABORATORIES

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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control	980
	True Value QC	1000
	% Recovery	98
	Relative Percent Difference	2.0

METHOD: Standard Methods 4500-Cl<sup>-</sup>B

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

  
Chemist

08-18-06  
Date

H11451

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

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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control		980
True Value QC		1000
% Recovery		98
Relative Percent Difference		2.0

METHOD: Standard Methods	4500-ClB
--------------------------	----------

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

Chemist

Date \_\_\_\_\_

H11417

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**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page \_\_\_\_ of \_\_\_\_

Company Name: <u>Hungry Horse, LLC</u>		BILL TO		ANALYSIS REQUEST																							
Project Manager: <u>Q. Brown</u>		P.O. #:																									
Address: <u>P.O. Box 1058</u>		Company:																									
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88241</u>		Attn:																									
Phone #: <u>390-6149</u> Fax #: <u>393-3386</u>		Address:																									
Project #: _____ Project Owner: <u>Apache</u>		City:																									
Project Name: <u>WEDY #527</u>		State: _____ Zip: _____																									
Project Location: <u>Dea Cnty</u>		Phone #: _____																									
Sampler Name: <u>Q. Brown</u>		Fax #: _____																									
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(GRAB OR C) OMP.	# CONTAINERS	MATRIX					PRESERV.		SAMPLING															
					GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME												
	H11550-1	BH #3 - 57' BBS	B				X							9/15/06	9 AM												
	-2	BH #3 - 60' BBS	B				X																				
	-3	BH #3 - 62' BBS			X																						
	-4	BH #4 - 25' BBS	B				X																				
	-5	" - 30' "					X																				
	-6	" - 35' "					X																				
	-7	" - 40' "					X																				
	-8	" - 45' "					X																				
	-9	" - 50' "					X																				

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Sampler Relinquished: <u>Q. Brown</u>		Date: <u>9/15/06</u>	Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
		Time: <u>1:35 PM</u>			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By: (Lab Staff)		REMARKS:	
		Time:	<u>Lab Staff</u>			
Delivered By: (Circle One)			Sample Condition		CHECKED BY:	
Sampler - UPS - Bus - Other:			Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		(Initials) <u>MA</u>	

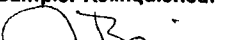



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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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<b>Sampler Relinquished:</b> 		<b>Date:</b> 9/26/06 <b>Time:</b> 1:35pm		<b>Received By:</b> 		<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b> <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b>	
<b>Relinquished By:</b>  		<b>Date:</b>  		<b>Received By: (Lab Staff)</b> 		<b>REMARKS:</b>	
<b>Delivered By: (Circle One)</b> (S) <b>Sampler - UPS - Bus - Other:</b>		<b>Sample Condition</b> Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>CHECKED BY:</b> (Initials) 			

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**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**Page 1 of 2

Company Name: <u>Hungry Horse LLC</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																							
Project Manager: <u>Jerry Brian</u>		P.O. #:																									
Address:		Company: <u>Hungry Horse</u>																									
City: <u>HOBBS</u> State: <u>NM</u> Zip: <u>88241</u>		Attn:																									
Phone #: <u>505-390-6149</u> Fax #:		Address:																									
Project #: <u>APA-06-002</u> Project Owner: <u>APACHE</u>		City:																									
Project Name: <u>NEDU #527</u>		State: Zip:																									
Project Location:		Phone #:																									
Sampler Name: <u>JOHN GOOD</u>		Fax #:																									
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	(GRAB OR (C)OMP. # CONTAINERS	MATRIX					PRESERV.	SAMPLING																		
			GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME														
H11539-1	S091406-BH1-25	X 1			X							9-14	1:00														
-2	-BH1-30	X 1			X								1:20														
-3	-BH1-35	X 1			X								1:40														
-4	-BH2-25	X 1			X								2:20														
-5	-BH2-30	X 1			X								2:40														
-6	-BH2-35	X 1			X								3:00														
-7	-BH3-25	X 1			X								3:40														
-8	-BH3-30	X 1			X								4:00														
-9	-BH3-35	X 1			X								4:20														
-10	-BH3-40	X 1			X								4:40														
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Sampler Relinquished: <u>John Good</u>		Date: <u>9-15-06</u> Time: <u>11:00</u>		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:																	
Relinquished By:		Date:		Received By: (Lab Staff)		REMARKS:																					
Delivered By: (Circle One)		Time:		Sample Condition		CHECKED BY: (Initials)																					
Sampler - UPS - Bus - Other:				Cool Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No																							

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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 2[illegible]

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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page \_\_\_\_ of \_\_\_\_

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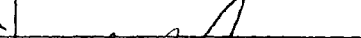

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Sample Relinquished: 		Date: 9/5/06	Received By: 	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No
		Time: 1:50 PM		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished By:		Date:	Received By: (Lab Staff)	REMARKS:
		Time:		
Delivered By: (Circle One) Sample - UPS - Bus - Other:		Sample Condition Temp, °C	Checked By: (Initials) 	
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

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**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page \_\_\_\_ of \_\_\_\_

Company Name:		BILL TO		ANALYSIS REQUEST																							
Project Manager:		P.O. #:																									
Address:		Company:																									
City:		Attn:																									
Phone #:		Address:																									
Project #:		City:																									
Project Name:		State:														Zip:											
Project Location:		Phone #:																									
Sampler Name:		Fax #:																									
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING																			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME													
W11451-1	C-16' BBS	8				X							8/8/06														
-2	SE-16' BBS												↓														
-3	NW-16' BBS																										
-4	SW-16' BBS																										
-5	C Wk P1 - 14' BBS												8/16/06														
-6	SW Wk P1 - 17' BBS												↓														
-7	C-17' BBS												↓														
-8	SW-17' BBS												↓														

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Sampler Relinquished:	Date: 8/7/06	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Time: 12:30PM	Received By: (Lab Staff)	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One)		Sample Condition	REMARKS:	
Sampler UPS - Bus - Other:		Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
		Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
		CHECKED BY: (Initials)		




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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page \_\_\_\_\_ of \_\_\_\_\_

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<b>Sampler Relinquished:</b> 		<b>Received By:</b> Date: 8-7-06 Time: 3:04		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Additional Fax #: _____ Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No REMARKS:	
<b>Relinquished By:</b> 		<b>Received By: (Lab Staff)</b> Date: 08-07-06 Time: 3:04 			
<b>Delivered By: (Circle One)</b> <del>Sample</del> - UPS - Bus - Other:		<b>Sample Condition</b> Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>CHECKED BY:</b> (Initials)	

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District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

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

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company - Apache Corporation	Contact - 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
Surface Owner	Mineral Owner
Lease No.	

#### LOCATION OF RELEASE

Unit Letter	Section 10	Township 21S	Range 37E	1310 Feet from the	South Line	330 Feet from the	West Line	County Lea
-------------	------------	--------------	-----------	--------------------	------------	-------------------	-----------	------------

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
Source of Release - compromised pit liner	Date and Hour of Occurrence unknown	Date and Hour of Discovery 7/19/06 7:30 AM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson / Glen Von Goten	
By Whom? Jerry Brian - Hungry Horse Environmental	Date and Hour	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. 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.\*

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 liner. 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 ml liner 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.

Signature: <i>J. Brian</i> Acting Agent for Apache Corp.	OIL CONSERVATION DIVISION	
Printed Name: <i>Jerry Brian</i>	Approved by District Supervisor:	
Title: <i>Environmental Manager - Hungry Horse Environmental</i>	Approval Date:	Expiration Date:
E-mail Address: <i>j.brian@verizon.net</i>	Conditions of Approval:	
Date: <i>11/6/06</i> Phone: <i>505-390-6149</i>	Attached <input type="checkbox"/>	

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-Cl<sup>-</sup>B).

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	1696
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.

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).

Date	Quadrant	Depth (bgs)	Chloride (ppm)
7/31/06	NE	10' BGS	17275
9/6/06	NE	19' BGS	288
7/31/06	NW	12' BGS	16315
8/8/06	NW	16' BGS	8797
9/6/06	NW	19' BGS	8557
7/31/06	C	10' BGS	2255
7/31/06	C	12' BGS	272
8/8/06	C	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

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





# ARDINAL LABORATORIES

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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: 09/20/06  
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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control		960
True Value QC		1000
% Recovery		96
Relative Percent Difference		1.0

**METHOD:** Standard Methods

4500-CIB

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

Chemist

Date \_\_\_\_\_

H11550

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**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page \_\_\_\_ of \_\_\_\_

Company Name: <u>Hungry Horse, LLC</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																		
Project Manager: <u>A. B. Bion</u>		P.O. #:																				
Address: <u>P.O. Box 1058</u>		Company:																				
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88241</u>		Attn:																				
Phone #: <u>390-6149</u> Fax #: <u>393-3386</u>		Address:																				
Project #: _____ Project Owner: <u>Apache</u>		City:																				
Project Name: <u>WEDU #527</u>		State: _____ Zip: _____																				
Project Location: <u>Lea Cnty</u>		Phone #: _____																				
Sampler Name: <u>A. B. Bion</u>		Fax #: _____																				
FOR LAB USE ONLY				MATRIX		PRESERV		SAMPLING														
Lab I.D.	Sample I.D.	(GRAB OR COMPOUND)	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE / COOL	OTHER:	DATE	TIME								
A11550-1	BH#3-57' BBS	0				X							9/19/06	9 AM								
-2	BH#3-60' BBS	0				X																
-3	BH#3-62' BBS			X																		
-4	BH#4-25' BBS	0				X																
-5	" - 30' "					X																
-6	" - 35' "					X																
-7	" 40' "					X																
-8	" 45' "					X																
-9	" 50' "					X																

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Fees and Groundwater Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all copies of collections, including attorney's fees.

Sampler Relinquished: <u>A. B. Bion</u>		Date: <u>9/20/06</u>	Received By: _____	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #: _____
Relinquished By: _____		Time: <u>1:35 PM</u>	Received By: (Lab Sign) <u>_____</u>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #: _____
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____		Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) <u>MA</u>	REMARKS:	

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



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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page        of       [illegible]

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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

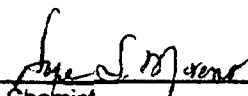
Analysis Date: 09/15/06  
Sampling Date: 09/14/06  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control		990
True Value QC		1000
% Recovery		99
Relative Percent Difference		1.0

METHOD: Standard Methods

4500-Cl<sup>-</sup>B

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

  
Chemist

09-18-06  
Date

H11539

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## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 1 of 2

Company Name: <u>Hungry Horse LLC</u>				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>											
Project Manager: <u>Jerry Brian</u>				P.O. #:															
Address:				Company: <u>Hungry Horse</u>															
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88241</u>				Attn:															
Phone #: <u>505-390-6149</u> Fax #:				Address:															
Project #: <u>APA-06-002</u> Project Owner: <u>APACHE</u>				City:															
Project Name: <u>NEDU #527</u>				State: Zip:															
Project Location:				Phone #:															
Sampler Name: <u>JOHN GOOD</u>				Fax #:															
FOR LAB USE ONLY		Lab I.D.		Sample I.D.		# CONTAINERS		MATRIX		PRESERV		SAMPLING							
								GROUNDWATER											
								WASTEWATER											
								SOIL											
								CRUDE OIL											
								SLUDGE											
								OTHER:											
								ACID/BASE:											
								ICE/COOL											
								OTHER:											
												DATE		TIME					
		<u>H153A-1</u>		<u>5061406-BH1-25</u>		<u>X</u>		<u>1</u>				<u>9-14</u>		<u>1:00</u>					
		<u>-2</u>		<u>-BH1-30</u>		<u>X</u>		<u>1</u>						<u>1:20</u>					
		<u>-3</u>		<u>-BH1-35</u>		<u>X</u>		<u>1</u>						<u>1:40</u>					
		<u>-4</u>		<u>-BH2-25</u>		<u>X</u>		<u>1</u>						<u>2:20</u>					
		<u>-5</u>		<u>-BH2-30</u>		<u>X</u>		<u>1</u>						<u>2:40</u>					
		<u>-6</u>		<u>-BH2-35</u>		<u>X</u>		<u>1</u>						<u>3:00</u>					
		<u>-7</u>		<u>-BH3-25</u>		<u>X</u>		<u>1</u>						<u>3:40</u>					
		<u>-8</u>		<u>-BH3-30</u>		<u>X</u>		<u>1</u>						<u>4:00</u>					
		<u>-9</u>		<u>-BH3-35</u>		<u>X</u>		<u>1</u>						<u>4:20</u>					
		<u>-10</u>		<u>-BH3-40</u>		<u>X</u>		<u>1</u>						<u>4:40</u>					

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Yarns and Chemicals returned will be charged on all shipments more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished By: <u>John Good</u>		Date: <u>9-15-06</u>		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
		Time: <u>11:00</u>				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By: (Lab Staff)		REMARKS:			
		Time:							
Delivered By: (Circle One)									
<input checked="" type="radio"/> Sampler - UPS - Bus - Other:				Sample Condition					
				Cool Intact					
				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
				<input type="checkbox"/> No <input type="checkbox"/> No					
				CHECKED BY: (Initials)					

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Nov 09 2006 7:28PM

Hungry Horse

391-4585

P.11



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 2

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Page 1 of 1

**Terms and Conditions:** Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

**PLEASE NOTE:** Liability and Damages, Cardinal's liability and Cardinal'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 equipment. All claims including those for negligence and any other claims whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits resulting by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claims are based upon any of the above stated theories or otherwise.

Sampler Relinquished: 		Date: 9-6-06 Time: 3:20		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished By:		Date: 9/6/06 Time: 3:20		Received By: (Lab Staff) 		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Temp. Intact? Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Checked By: (Initials)		REMARKS:	

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## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page \_\_\_\_ of \_\_\_\_

Company Name: <b>Hungry Horse</b>		BILL TO		ANALYSIS REQUEST									
Project Manager: <b>J. Brian</b>		P.O. #:											
Address: <b>PO Box 1058</b>		Company:											
City: <b>Hobbs</b> State: <b>NM</b> Zip: <b>88240</b>		Attn:											
Phone #: <b>390-6149</b> Fax #: <b>393-3386</b>		Address:											
Project #: _____ Project Owner: <b>Apache</b>		City:											
Project Name: <b>WED 4 # 527</b>		State: _____ Zip: _____											
Project Location: <b>Lea County</b>		Phone #: _____											
Sampler Name: <b>JB</b>		Fax #: _____											
FOR LAB USE ONLY													
Lab I.D.	Sample I.D.	GRAB OR (COMP. # CONTAINERS)	MATRIX	PRESERV.	SAMPLING								
			GROUNDWATER										
			WASTEWATER										
			SOIL										
			OIL										
			SLUDGE										
			OTHER:										
			ACID/BASE:										
			ICE / COOL										
			OTHER:										
						DATE	TIME						
	<b>H11500-1 NW-19 BBS</b>					<b>8/28/06</b>							
	<b>-2 SW-19 BBS</b>					<b>8/28/06</b>							
	<b>-3 SW-Wrk Pit-19 BBS</b>					<b>8/28/06</b>							

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Sampler Relinquished: <b>J. Brian</b>		Date: <b>8/5/06</b>	Received By: _____	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished By: _____		Time: <b>1:50 PM</b>	Received By: (Lab Staff) <b>[Signature]</b>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No
Delivered By: (Circle One)		Date: _____	Time: _____	REMARKS:
Sample: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Bus <input type="checkbox"/> Other:		Sample Condition	Temp, °C	Intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
		Checked By: <b>[Signature]</b>	(Initial)	

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

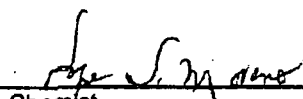
Receiving Date: 08/17/06  
Reporting Date: 08/18/06  
Project Owner: APACHE  
Project Name: NEDU #527  
Project Location: LEA COUNTY, NM

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 <sup>-</sup> (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 Control	980
	True Value QC	1000
	% Recovery	98
	Relative Percent Difference	2.0

METHOD: Standard Methods	4500-ClB
--------------------------	----------

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

  
Chemist

08-18-06  
Date

H11451

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**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page \_\_\_\_ of \_\_\_\_

Company Name: <u>Hungry Horse</u>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>											
Project Manager: <u>JB</u>		P.O. #:													
Address: <u>P.O. Box 1058</u>		Company:													
City: <u>Abilene</u> State: <u>NM</u> Zip: <u>88241</u>		Addr:													
Phone #: <u>390-6149</u> Fax #: <u>393-3386</u>		Address:													
Project #: _____ Project Owner: <u>Apache</u>		City:													
Project Name: <u>NEDU F527</u>		State: _____ Zip: _____													
Project Location: <u>Leg Cntry</u>		Phone #: _____													
Sampler Name: <u>JB</u>		Fax #: _____													
FOR LAB USE ONLY															
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX			PRESERV		SAMPLING						
				GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	
H11451-1	C-16' BBS	8				X							8/8/06		
-2	SE-16' BBS														
-3	NW-16' BBS														
-4	SW-16' BBS														
-5	C Wk Pk -14' BBS												8/16/06		
-6	SW Wk Pk -17' BBS														
-7	C-17' BBS														
-8	SW-17' BBS														
<small>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, 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 heretofore by Cardinal, regardless of whether such claim is based upon any of the above stated causes or otherwise.</small>															
Sampler Relinquished By: <u>JB</u>		Date: <u>8/10/06</u>		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:							
Relinquished By: <u>JB</u>		Date: <u>8.30.06</u>		Received By: (Lab Staff) <u>Burman</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:							
Delivered By: (Circle One) <u>Sampler</u>		Sample Condition		CHECKED BY:		REMARKS:									
UPS - Bus - Other:		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		(Initials)											

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# ARDINAL LABORATORIES

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

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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (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 Control		980
True Value QC		1000
% Recovery		98
Relative Percent Difference		2.0

METHOD: Standard Methods	4500-CIB
--------------------------	----------

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

*[Signature]*  
Chemist

08-08-06  
Date

H11417

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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**CARDINAL LABORATORIES, INC.**

2111 Beechwood, Abilene, TX 79803 101 East Marland, Hobbs, NM 88240  
(815) 873-7001 Fax (815) 873-7020 (505) 393-2326 Fax (505) 393-2478

Page \_\_\_\_ of \_\_\_\_

Company Name: Hungry Horse  
Project Manager: Jerry Brown PO #: 111417  
Address: P.O. Box 1058 Company:  
City: Halls State: NM Zip: 88241 Attn:  
Phone #: 390-6149 Address:  
Fax #: 393-3386 City:  
Project #: Project Owner: Apache State: Zip:  
Project Name: WEDU 6527 Phone #:  
Project Location: Lee County Fax #:

FOR LAB USE ONLY				MATRIX				PRES.		SAMPLING		ANALYSIS REQUEST														
LAB I.D.	Sample I.D.	(GRAB OR COMB.)	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID	ICE / COOL	OTHER:	DATE	TIME												
H11417-1	5A-10' BGS	G				X							7-31-06		CL-											
-2	WE-10' BGS	G											7-31-06													
-3	C-10' BGS	G											7-31-06													
-4	C-12' BGS	G											8-7-06 2:05pm													
-5	SW-12' BGS	G											8-7-06 2:05pm													
-6	WS-12' BGS	G											8-7-06 2:07pm													

PLEASE NOTE: Liability and Damages. Cardinal Laboratories and its agents assume no liability for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated services or otherwise.

Terms and Conditions: Client will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: <u>8-7-06</u>	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Additional Fax #: <input type="checkbox"/> Yes <input type="checkbox"/> No
<u>[Signature]</u>	Time: <u>3:04</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished By:	Date: <u>08-07-06</u>	Received By: (Lab Staff)	REMARKS:
<u>[Signature]</u>	Time: <u>3:04</u>	<u>[Signature]</u>	
Delivered By: (Circle One)	Sample Condition	CHECKED BY:	
Sample - UPS - Bus - Other:	Cool Intact	(Initials)	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

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

P.20  
391-4585  
Hungry Horse  
Nov 09 2006 7:33AM

TRANSACTION REPORT

P. 01

NOV-09-2006 THU 06:44 AM

FOR:

RECEIVE

DATE	START	SENDER	RX TIME	PAGES	TYPE	NOTE	M#	DP
NOV-09	06:35 AM	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: Dan Von Bortem

FAX NUMBER: 505-476-3462

FROM: J. Bortem

DATE: 11/8/06 TIME: \_\_\_\_\_

NUMBER OF PAGES TO FOLLOW: ~~20~~ 19

IF THERE ARE ANY QUESTIONS CONCERNING THIS  
MESSAGE, PLEASE CONTACT:

PHONE/FAX: 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

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

Form C-101  
Permit 11271

### APPLICATION FOR PERMIT TO DRILL

Operator Name and Address APACHE CORP 6120 S. Yale, Suite 1500 Tulsa, OK 74136-4224		OGRID Number 873
		API Number 30-025-37242
Property Code 22503	Property Name NORTHEAST DRINKARD UNIT	Well No. 527

### Surface Location

UL or Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	10	21S	37E	M	1310	S	330	W	Lea

### Proposed Pools

EUNICE,BLI-TU-DR, NORTH 22900
-------------------------------

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

### Proposed Casing and Cement Program

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

### Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	2000	3000	

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: Drilling 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.

# WELL LOGS

API number:	30-025-37242	
OGRID:		Operator: APACHE CORP
	Property:	NORTHEAST DRINKARD UNIT # 527

surface	ULSTR: M	10	T 21S	R 37E
		1310 FSL	330 FWL	

BH Loc	ULSTR: M	10	T 21S	R 37E
		1310 FSL	330 FWL	

Ground Level:	3464	DF:	3474	KB:	3475
Datum:	KB			TD:	6862

Land: STATE

Completion Date: (1) 10/7/2005  
 Date Logs Received: 12/5/2005 \*\*Late  
 Date Logs Due in: (2) 10/27/2005

Confidential:	NO		Date out:	
---------------	----	--	-----------	--

Confidential period: 90 Days for State & Fee, 1 Year for federal

Date Due In: (1) is equal to Completion Date (1) + 20 days

Logs	Depth interval		
DSN/SDL	200	6864	Spectral Density Dual Spaced Neutron
DLL/MSFL	5000	6864	Dual Laterolog Micro Spherically Focused Log

## OCD TOPS

Rustler	1276	Strawn		
Tansill		Atoka		
Yates	2637	Morrow		
7R	2858			
T. Bowers Sd				
B. Bowers Sd				
Queen	3431			
Penrose				
Grayburg	3747			
San Andres	3979			
Glorieta	5163			
Tubb	6123			
Drinkard	6440			
Abo	6722			
Wolfcamp				

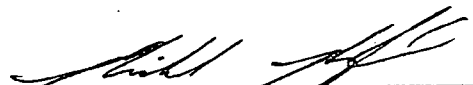
Apache Corporation  
6120 S. Yale Ste 1500  
Tulsa, OK 74136

NEDU # 527  
Lea County New, Mexico

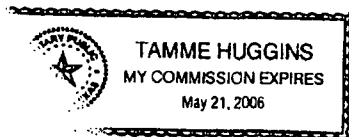
m-10-215-37e  
1310/S & 330/W  
30.025-37242



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

  
Michael Roghair - General Manager

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



  
Notary Public



## DISTRICT I

1825 N. FRANCES DR., ROSES, NM 88240

## DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87506

## State of New Mexico

Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

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

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-37242	Pool Code 22900	Pool Name Eunice; Blinebry - Tubb - Drinkard - North
Property Code 22503	Property Name NEDU	Well Number 527
OGRID No. 00873	Operator Name APACHE CORPORATION	Elevation 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

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 or Infill	Consolidation Code	Order No.						

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

	<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=543842.7 N X=862437.1 E</p> <p>LAT.=32°29'22.72" N LONG.=103°09'28.47" W</p>		<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Elaine Linton</i> Signature</p> <p>Elaine Linton Printed Name</p> <p>Engineering Technician Title</p> <p>December 2, 2005 Date</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>MARCH 22, 2005</p>		<p>Date Surveyed</p> <p>Signature of Professional Surveyor</p> <p>Professional Surveyor</p> <p>NEW MEXICO</p> <p>Professional Surveyor</p> <p>05.11.0479</p> <p>Certificate No. GARY 210505</p> <p>12841</p>
	<p>330'</p> <p>1310'</p>		<p>DEL</p> <p>ROBERTA</p> <p>000</p>

Submit 3 Copies To Appropriate District Office  
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., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
March 4, 2004

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO.	30-025-37242
5. Indicate Type of Lease	STATE <input checked="" type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	NEDU
8. Well Number	527
9. OGRID Number	873
10. Pool name or Wildcat	EUNICE; BLI-TU-DR, NORTH 22900

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR 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 <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>	7. Lease Name or Unit Agreement Name NEDU
2. Name of Operator APACHE CORPORATION	8. Well Number 527
3. Address of Operator 6120 S. YALE, STE. 1500	9. OGRID Number 873
4. Well Location Unit Letter <u>10M</u> : <u>1310</u> feet from the <u>S</u> line and <u>330</u> feet from the <u>VA</u> line Section <u>10</u> Township <u>21S</u> Range <u>37E</u> NMPM County <u>LEA</u>	10. Pool name or Wildcat EUNICE; BLI-TU-DR, NORTH 22900
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 \_\_\_\_\_ Rng \_\_\_\_\_ Pit type \_\_\_\_\_ Depth to Groundwater \_\_\_\_\_ Distance from nearest fresh water well \_\_\_\_\_  
Distance from nearest surface water \_\_\_\_\_ Below-grade Tank Location UL \_\_\_\_\_ Sect \_\_\_\_\_ Twp \_\_\_\_\_ Rng \_\_\_\_\_ ;  
\_\_\_\_\_ feet from the \_\_\_\_\_ line and \_\_\_\_\_ feet from the \_\_\_\_\_ line

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPLETION <input type="checkbox"/> OTHER: <input type="checkbox"/>	SUBSEQUENT REPORT OF: REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS. <input type="checkbox"/> PLUG AND ABANDONMENT <input type="checkbox"/> CASING TEST AND CEMENT JOB <input type="checkbox"/> OTHER: SPUD, SURF. CSG., TD, LOG, PROD. CSG. <input checked="" type="checkbox"/>
--	---

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE 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 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/ 375 SX 35.65 POZ W/ 6% GEL + 2% CACI + .25# CF = 125 BBLS 12.7# 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 OFF 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. DRLG. 7.875 FORMATOIN, 1283-1420'. SURVEY @ 2487, = 1.5. SERV. RIG. CHANGE OIL IN LIGHTPLANT. DRILL - 5716' - 5936'. 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. T I H BREAKING CIRC. @ DC & 2 JTS. DP, 50 JTS. DP INSTALL KSW'S & STRIPPING RUBBER WASH 90' TO BTM. / CIRC. BTMS UP. DRILG. W/ BIT # 3 - 5936' - 6130'. DRILL - 6700' - 6862'. LOST 350 PSI - CHECK SURFACE EQUIP, PUMP SOFTLINE, PRESS INCREASE 7.5 MINUTES. 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 & L-80 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% FL-52 = 325 BBLS 11.8# SLURRY W/ 2.44 YIELD & 400 SX 50:50 POZ C W/ 5% SALT + .6% FL25 = 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.

I 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 Lana Williams TITLE DRILLING CLERK II DATE 10/5/05

Type or print name LANA WILLIAMS

E-mail address: lana.williams@apachecorp.com

Telephone No. 918-491-4980

This space for State use)

APPROVED BY [Signature]

TITLE PETROLEUM ENGINEER

DATE 10/7/2005

Conditions of approval, if any:

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-104  
Revised June 10, 2003

Submit to Appropriate District Office  
5 Copies

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

<sup>1</sup> Operator name and Address <b>Apache Corporation 6120 South Yale, Suite 1500 Tulsa, OK 74136-4224</b>		<sup>2</sup> OGRID Number <b>00873</b>
		<sup>3</sup> Reason for Filing Code/ Effective Date <b>NW - 10/7/2005</b>
<sup>4</sup> API Number <b>30 -025-37242</b>	<sup>5</sup> Pool Name <b>Eunice; Blinebry - Tubb - Drinkard - North</b>	<sup>6</sup> Pool Code <b>22900</b>
<sup>7</sup> Property Code <b>22503</b>	<sup>8</sup> Property Name <b>Northeast Drinkard Unit</b>	<sup>9</sup> Well Number <b>527</b>

II. <sup>10</sup> Surface Location

UL or lot no. <b>M</b>	Section <b>10</b>	Township <b>21S</b>	Range <b>37E</b>	Lot Idn	Feet from the <b>1310</b>	North/South Line <b>South</b>	Feet from the <b>330</b>	East/West line <b>West</b>	County <b>Lea</b>
---------------------------	----------------------	------------------------	---------------------	---------	------------------------------	----------------------------------	-----------------------------	-------------------------------	----------------------

<sup>11</sup> 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
<sup>12</sup> Lse Code <b>S</b>	<sup>13</sup> Producing Method Code <b>P</b>	<sup>14</sup> Gas Connection Date <b>10/07/2005</b>	<sup>15</sup> C-129 Permit Number	<sup>16</sup> C-129 Effective Date	<sup>17</sup> C-129 Expiration Date				

III. Oil and Gas Transporters

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

IV. Produced Water

<sup>23</sup> POD <b>2264750</b>	<sup>24</sup> POD ULSTR Location and Description <b>Unit A, Sec 2, T 21S, R 37E, NEDU Central Tank Battery</b>
-------------------------------------	---


V. Well Completion Data

<sup>25</sup> Spud Date <b>09/02/2005</b>	<sup>26</sup> Ready Date <b>10/07/2005</b>	<sup>27</sup> TD <b>6862'</b>	<sup>28</sup> PBTD <b>6843'</b>	<sup>29</sup> Perforations <b>5629 - 6687'</b>	<sup>30</sup> DHC: MC
<sup>31</sup> Hole Size <b>12-1/4"</b>	<sup>32</sup> Casing & Tubing Size <b>8-5/8"</b>	<sup>33</sup> Depth Set <b>1283'</b>	<sup>34</sup> Sacks Cement <b>575 sx / circ 116 sx</b>		
<b>7-7/8"</b>	<b>5-1/2"</b>	<b>6862'</b>	<b>1150 sx / TOC 208' CBL</b>		

VI. Well Test Data

<sup>35</sup> Date New Oil <b>10/07/2005</b>	<sup>36</sup> Gas Delivery Date <b>10/07/2005</b>	<sup>37</sup> Test Date <b>10/19/2005</b>	<sup>38</sup> Test Length <b>24 hrs</b>	<sup>39</sup> Tbg. Pressure	<sup>40</sup> Csg. Pressure
<sup>41</sup> Choke Size <b>70</b>	<sup>42</sup> Oil	<sup>43</sup> Water <b>31</b>	<sup>44</sup> Gas <b>1030</b>	<sup>45</sup> AOF	<sup>46</sup> Test Method <b>Pumping</b>

<sup>47</sup> I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Elaine Linton</i>		OIL CONSERVATION DIVISION	
Printed name: <b>Elaine Linton</b>		Approved by: <i>[Signature]</i>	
Title: <b>Engineering Technician</b>		Title: <b>PETROLEUM ENGINEER</b>	
E-mail Address: <b>elaine.linton@apachecorp.com</b>		Approval Date: <b>DEC 07 2005</b>	
Date: <b>12/02/2005</b>	Phone: <b>(918)491-5362</b>		

Submit To Appropriate District Office State Lease - 6 copies Fee Lease - 5 copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	<b>State of New Mexico</b> <b>Energy, Minerals and Natural Resources</b>  <b>Oil Conservation Division</b> <b>1220 South St. Francis Dr.</b> <b>Santa Fe, NM 87505</b>	<b>Form C-105</b> Revised June 10, 2003
		WELL API NO. <b>30-025-37242</b>
		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
		State Oil & Gas Lease No.
<b>WELL COMPLETION OR RECOMPLETION REPORT AND LOG</b>		
1a. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		7. Lease Name or Unit Agreement Name <b>Northeast Drinkard Unit</b>
b. Type of Completion: NEW <input checked="" type="checkbox"/> WORK <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG <input type="checkbox"/> DIFF. WELL OVER BACK RESVR. <input type="checkbox"/> OTHER		
2. Name of Operator <b>Apache Corporation</b>		8. Well No. <b>527</b>
3. Address of Operator <b>6120 South Yale, Suite 1500 Tulsa, OK 74136-4224</b>		9. Pool name or Wildcat <b>Eunice; Blinebry - Tubb - Drinkard - North 22900</b>
4. Well Location Unit Letter <b>M</b> <b>1310</b> Feet From The <b>South</b> Line and <b>330</b> Feet From The <b>West</b> Line Section <b>10</b> Township <b>21S</b> Range <b>37E</b> NMPM Lea County		
10. Date Spudded <b>09/02/2005</b>	11. Date T.D. Reached <b>09/14/2005</b>	12. Date Compl. (Ready to Prod.) <b>10/07/2005</b>
13. Elevations (DF& RKB, RT, GR, etc.) <b>3464'</b>		14. Elev. Casinghead
15. Total Depth <b>6862'</b>	16. Plug Back T.D. <b>6843'</b>	17. If Multiple Compl. How Many Zones? <b>3</b>
18. Intervals Drilled By <b>X</b>		Rotary Tools <b>X</b>
19. Producing Interval(s) of this completion - Top, Bottom, Name <b>Blinebry, Tubb, Drinkard</b>		20. Was Directional Survey Made <b>No</b>
21. Type Electric and Other Logs Run <b>SD/DSN, DLL/MG</b>		22. Was Well Cored <b>No</b>
<b>23. CASING RECORD (Report all strings set in well)</b>		
CASING SIZE	WEIGHT LB./FT.	DEPTH SET
<b>8-5/8"</b>	<b>24#</b>	<b>1283'</b>
<b>5-1/2"</b>	<b>17#</b>	<b>6862'</b>
24. LINER RECORD		25. TUBING RECORD
SIZE	TOP	SIZE
		<b>2-7/8"</b>
BOTTOM	SACKS CEMENT	DEPTH SET
		<b>6713'</b>
26. Perforation record (interval, size, and number) <b>BLINEBRY 5629-32,82-84,5720-24,5806-10,72-75,5930-32 &amp; 6017-20' 2 JSPF</b> <b>TUBB 6134-38,93-97,6251-57 &amp; 6329-31' 2 JSPF</b> <b>DRINKARD 6578-82,6614-18,54-58 &amp; 6683-87' 2 JSPF</b>		27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL      AMOUNT AND KIND MATERIAL USED <b>5629 - 6020'      2000gals 15%HCl, 41kgals gel+84k# 20/40 sd</b> <b>6134 - 6331'      2000gals 15%HCl, 40kgals gel+82k# 20/40 sd</b> <b>6578 - 6687'      2000gals 15%HCl, 42kgals gel+62k# 20/40 sd</b>
<b>28. PRODUCTION</b>		
Date First Production <b>10/07/2005</b>	Production Method (Flowing, gas lift, pumping - Size and type pump) <b>Pumping</b>	Well Status (Prod. or Shut-in) <b>Producing</b>
Date of Test <b>10/19/2005</b>	Hours Tested <b>24 hrs</b>	Choke Size
		Prod'n For Test Period
		Oil - Bbl <b>70</b>
		Gas - MCF <b>1030</b>
		Water - Bbl <b>31</b>
		Gas - Oil Ratio <b>14714</b>
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate
		Oil - Bbl
		Gas - MCF
		Water - Bbl
		Oil Gravity - API - (Corr.) <b>40.0</b>
29. Disposition of Gas (Sold, used for fuel, vented, etc.) <b>Sold</b>		Test Witnessed By <b>Apache Corporation</b>
30. List Attachments <b>Logs, Deviation Report, C-102, C-104</b>		
31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief		
Signature 		Printed Name <b>Elaine Linton</b>
E-mail Address <b>elaine.linton@apachecorp.com</b>		Title <b>Engineering Technician</b>
		Date <b>12/02/2005</b>

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		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..... No. 3, from.....to.....  
No. 2, from.....to..... No. 4, from.....to.....

## IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....  
 No. 2, from.....to.....feet.....  
 No. 3, from.....to.....feet.....

## LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology



**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., 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-102


Permit 11271

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

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

**Surface And Bottom Hole Location**

UL or Lot M	Section 10	Township 21S	Range 37E	Lot Ldn M	Feet From 1310	N/S Line S	Feet From 330	E/W Line W	County Lea
Dedicated Acres 40	Joint or Infill	Consolidation 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.*

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
PKAUTZ	Notice is to be given to the OCD prior to construction of the pit(s)
PKAUTZ	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

Vmail

• Evelyn WITNBS. SVCS. - ADAMS OF TVL  
476-1947

• 4:16 -

• 4:31 - Mike Griffin 201-394-2050

• 7:39 - Jenny Brown - Human Hwy

APACHE NEDU 527 30-025-37242

10M 215, 37E

GW CONTAMINATION

505-80-6149

Mike Griffin - 9:13

• Jenny Brown -

LP Pit Closure - Don't want to leave open

ATW @ REMOVE BOSS YAS.

~~SW corner.~~

SE corner BH-3-60' CL-656

ATW @ 62' @ 2007

Bottom @ 20'

@ Monument Draw

Chao to NE.