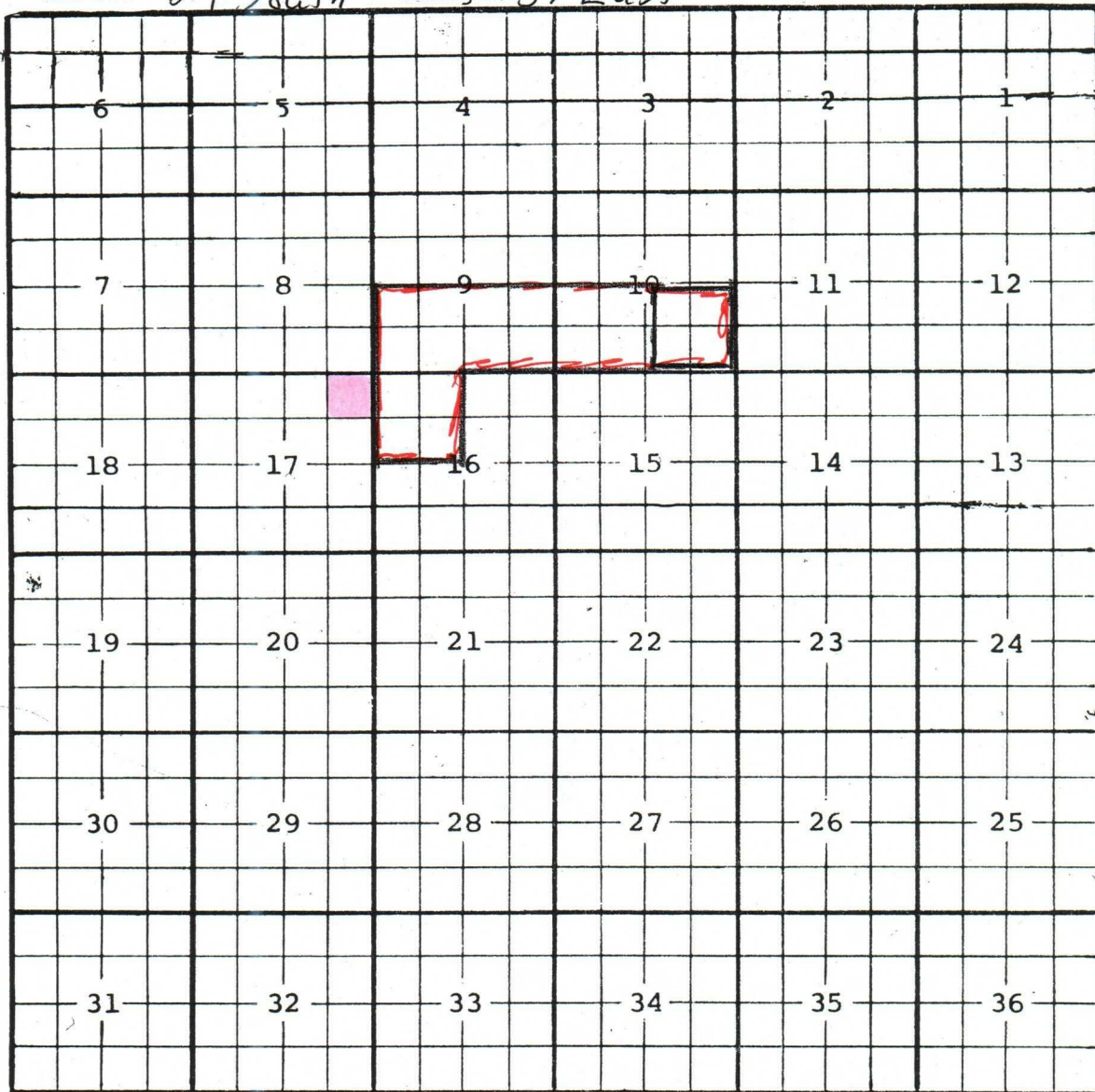


County Lea Pool East Hare-San Andres

TOWNSHIP 21 South Range 37 East NMPM



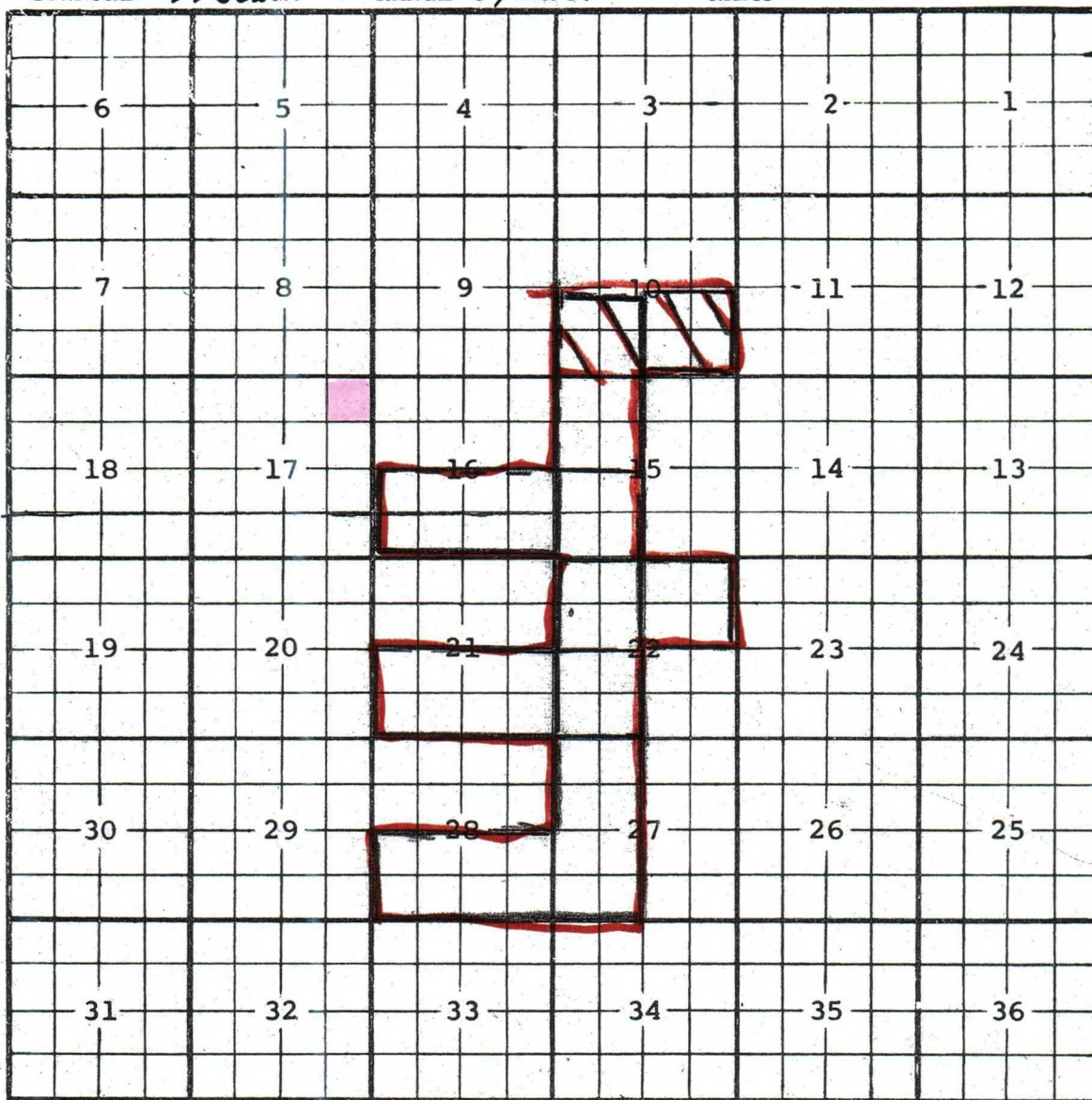
Description: SE 1/4 Sec. 10 (R-10776, 2-28-97)

Ext: 1/2 Sec. 9, SW 1/4 Sec. 10, NW 1/4 Sec. 16 (R-12190, 8-12-94)



COUNTY *Lea*POOL *Hare - San Andres Gas*TOWNSHIP *21 South*RANGE *37 East*

NMPM

Description: *SW*  $\frac{1}{4}$  Sec. 22 (R-4423, 11-1-71)Ext:  $\frac{W}{2}$  Sec. 27,  $\frac{S}{2}$  Sec. 28 (R-4809, 6-18-74)Ext:  $\frac{S}{2}$  Sec. 21 (R-6698, 6-2-81) EXT: NW  $\frac{1}{4}$  sec. 22 (R-8946, 7-1-89)EXT: SW  $\frac{1}{4}$  sec. 15 (R-9741, 9-1-89) EXT: *SW*  $\frac{1}{4}$  Sec. 10, *NW*  $\frac{1}{4}$  Sec. 15 (R-10091, 3-28-94)Ext: *SE*  $\frac{1}{4}$  Sec. 10, *NE*  $\frac{1}{4}$  Sec. 22 (R-10588, 4-26-96)Ext:  $\frac{S}{2}$  Sec. 16 (R-11116, 1-7-99) Delete  $\frac{S}{2}$  Sec. 10 (R-12190, 8-12-04)



OPER. OGRID NO. 873  
PROPERTY NO. 2443D  
POOL CODE 5035D  
EFF. DATE \_\_\_\_\_  
API NO. 30-025-36661

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

EC

APPLICA

Lease Serial No.  
NMLC032096A

If Indian, Allottee or Tribe Name

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		<b>CONFIDENTIAL</b>	7. If Unit or CA Agreement, Name and No.	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone			8. Lease Name and Well No. LOCKHART A-17 9	
2. Name of Operator APACHE CORPORATION		Contact: BONNIE JONES E-Mail: bonitaj@cableone.net		9. API Well No. <u>30-025-36661</u>
3a. Address 6120 SOUTH YALE, SUITE 1500 TULSA, OK 74136-4224		3b. Phone No. (include area code) Ph: 505.624.9799 Fx: 505.624.9799		10. Field and Pool, or Exploratory PENROSE SKELLY
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENE 110FNL 80FEL At proposed prod. zone NENE 110FNL 80FEL <b>SUBJECT TO LIKE APPROVAL BY STATE</b> <u>Unit A</u>			11. Sec., T., R., M., or Blk. and Survey or Area Sec 17 T21S R37E Mer NMP SME: FEE	
14. Distance in miles and direction from nearest town or post office* 3.5 MILES NORTHWEST OF EUNICE, NM		12. County or Parish LEA		13. State NM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 80'		16. No. of Acres in Lease 640.00		17. Spacing Unit dedicated to this well 140.00
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 799.4'		19. Proposed Depth 4150 MD 4150 TVD		20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KB, RT, GL, etc.) 3497 GL		22. Approximate date work will start 12/15/2003		23. Estimated duration 7 DAYS

24. Attachments

**Capitan Controlled Water Basin**

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)		Name (Printed/Typed) BONNIE JONES	Date 11/17/2003
Title AGENT			
Approved by (Signature) <u>/S/ JOE G. LARA</u>		Name (Printed/Typed) <u>/S/ JOE G. LARA</u>	Date <u>DEC 15 2003</u>
Title <u>ACTING</u> FIELD MANAGER		Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

**APPROVAL FOR 1 YEAR**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #25160 verified by the BLM Well Information System  
For APACHE CORPORATION, sent to the Hobbs

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED**

**DECLARED WATER BASIN**

**CEMENT BEHIND THE 8 3/8" CASING MUST BE CIRCULATED**

**CEMENT BEHIND THE 5 1/2" CASING MUST BE CIRCULATED**

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*



DISTRICT I  
P.O. Box 1200, Hobbs, NM 88241-1200

DISTRICT II  
P.O. Box 100, Artesia, NM 88211-0100

DISTRICT III  
1000 Rio Grande Bl., Aztec, NM 87410

DISTRICT IV  
P.O. Box 1000, Santa Fe, NM 87504-1000

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

EXHIBIT D-1

Sub

State Lease - 4 Copies  
For Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-36661</b>	Pool Code <b>50350</b>	Pool Name <b>Penrose Skelly; Grayburg</b>
Property Code <b>24430</b>	Property Name <b>LOCKHART A-17</b>	Well Number <b>9</b>
OGHD No. <b>873</b>	Operator Name <b>APACHE CORPORATION</b>	ELEVATION <b>3497'</b>

Surface Location

UL or Lot No.	Section	Township	Range	Lot 1/4	Feet from the	North/South line	Feet from the	East/West line	County
A	17	21-S	37-E		110'	NORTH	80'	EAST	LEA

Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot 1/4	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres <b>40.00</b>	Joint or Infill	Consolidation Code	Order No. <b>NSL-5024&lt;50&gt;</b>						

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 Y = 542366.2 N X = 856759.8 E LAT. 32°29'08.72"N LONG. 103°10'34.93"W</p>	<p>80' → ↑ 110'</p>		<b>OPERATOR CERTIFICATION</b>	
			<p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p>	
			<p><i>Michelle Hanson</i> Signature</p>	
			<p><b>Michelle Hanson</b> Printed Name</p>	
		<p><b>Drilling Technician</b> Title</p>		
		<p><b>9/22/03</b> Date</p>		
		<b>SURVEYOR CERTIFICATION</b>		
		<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>August 06, 2003</p>		
		<p>Date Surveyed <b>A.W.B.</b></p>		
		<p>Signature of <b>Ronald J. Hanson</b> Professional Surveyor</p>		
		<p><b>Ronald J. Hanson</b> Professional Surveyor 03.11.0857</p>		
		<p>Certificate No. <b>RONALD J. HANSON 2239</b> <b>CERT. EXPIRES 12/31/04</b></p>		
		<p><b>REGISTERED PROFESSIONAL</b></p>		



DISTRICT I  
P.O. Box 1260, Hobbs, NM 88241-1260

DISTRICT II  
P.O. Drawer 20, Artesia, NM 88211-0710

DISTRICT III  
1000 Elie Brown Rd., Aztec, NM 87410

DISTRICT IV  
P.O. Box 2088, Santa Fe, N.M. 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

EXHIBIT D-2

Form OCS-100 - 10/95  
You Lease - 5 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Well Code	Well Name
Property Code	Property Name LOCKHART A-17	Well Number 9
OCRD No.	Operator Name APACHE CORPORATION	ELEVATION 3497'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	17	21-S	37-E		110'	NORTH	80'	EAST	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 InRR	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

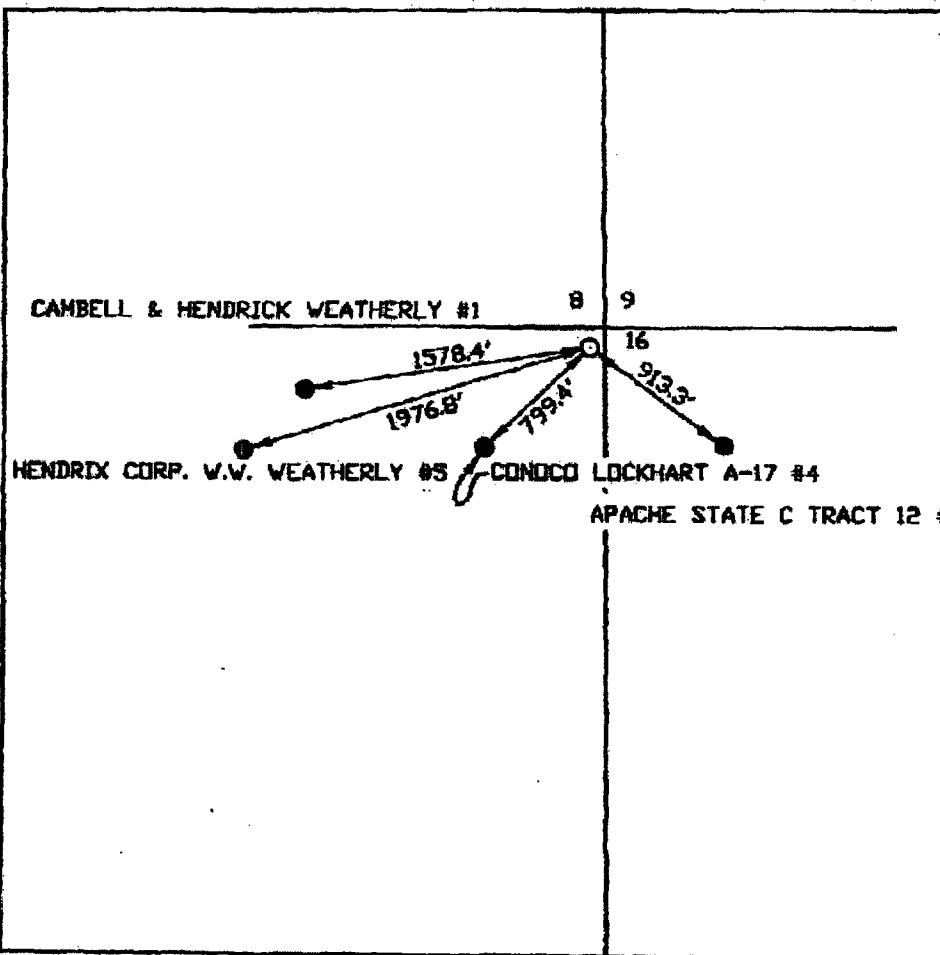
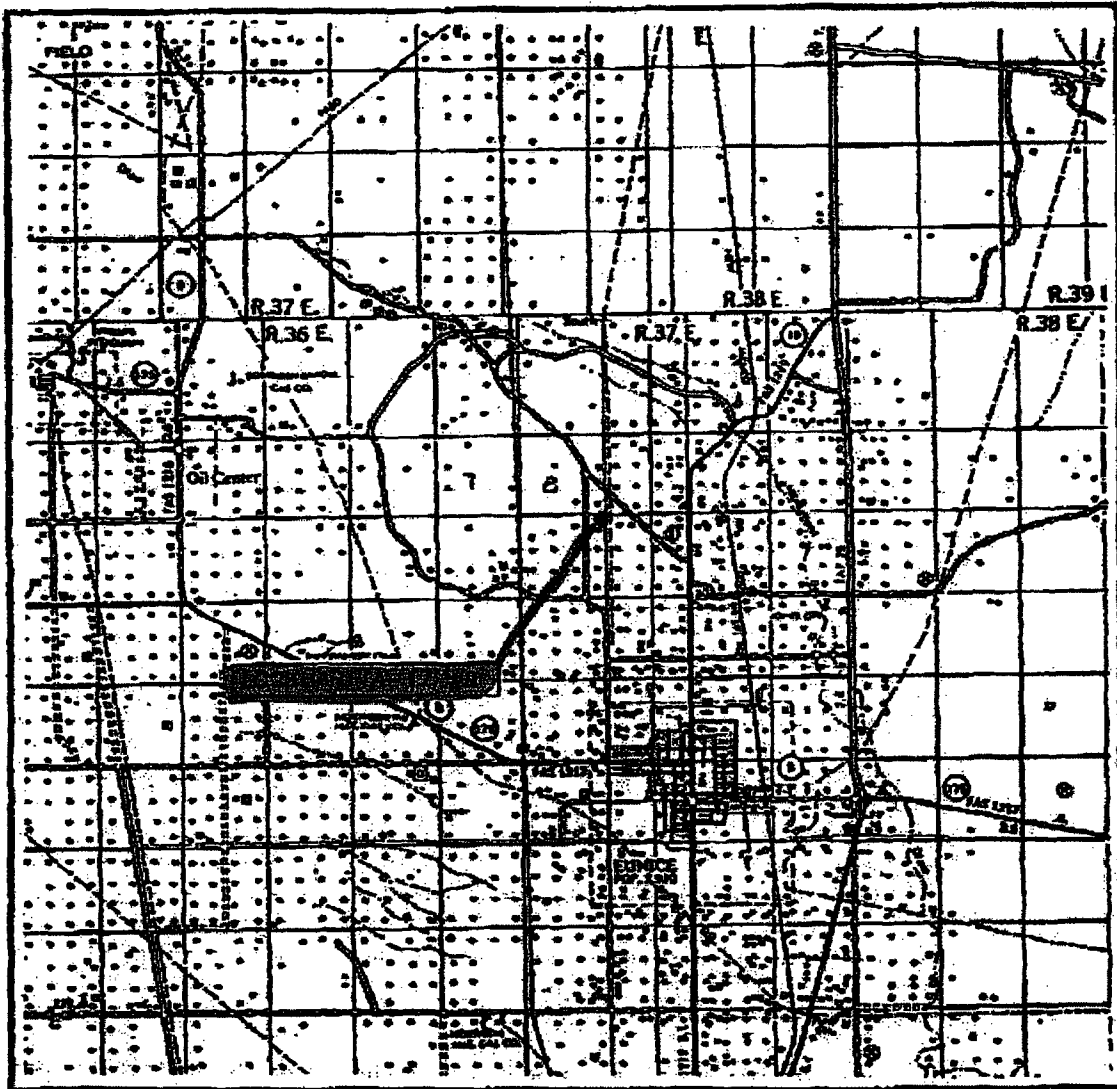
	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature _____</p> <p>Printed Name _____</p> <p>Title _____</p> <p>Date _____</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify 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>August 06, 2003</p> <p>Date Surveyed _____ A.W.B.</p> <p>Signature &amp; Seal of Professional Surveyor _____</p> <p>03.11.0857</p> <p>Certificate No. RONALD J. KIDSON 8230 GARY KIDSON 12941</p>
---	--



EXHIBIT E-1

# VICINITY MAP



SCALE: 1" = 2 MILES

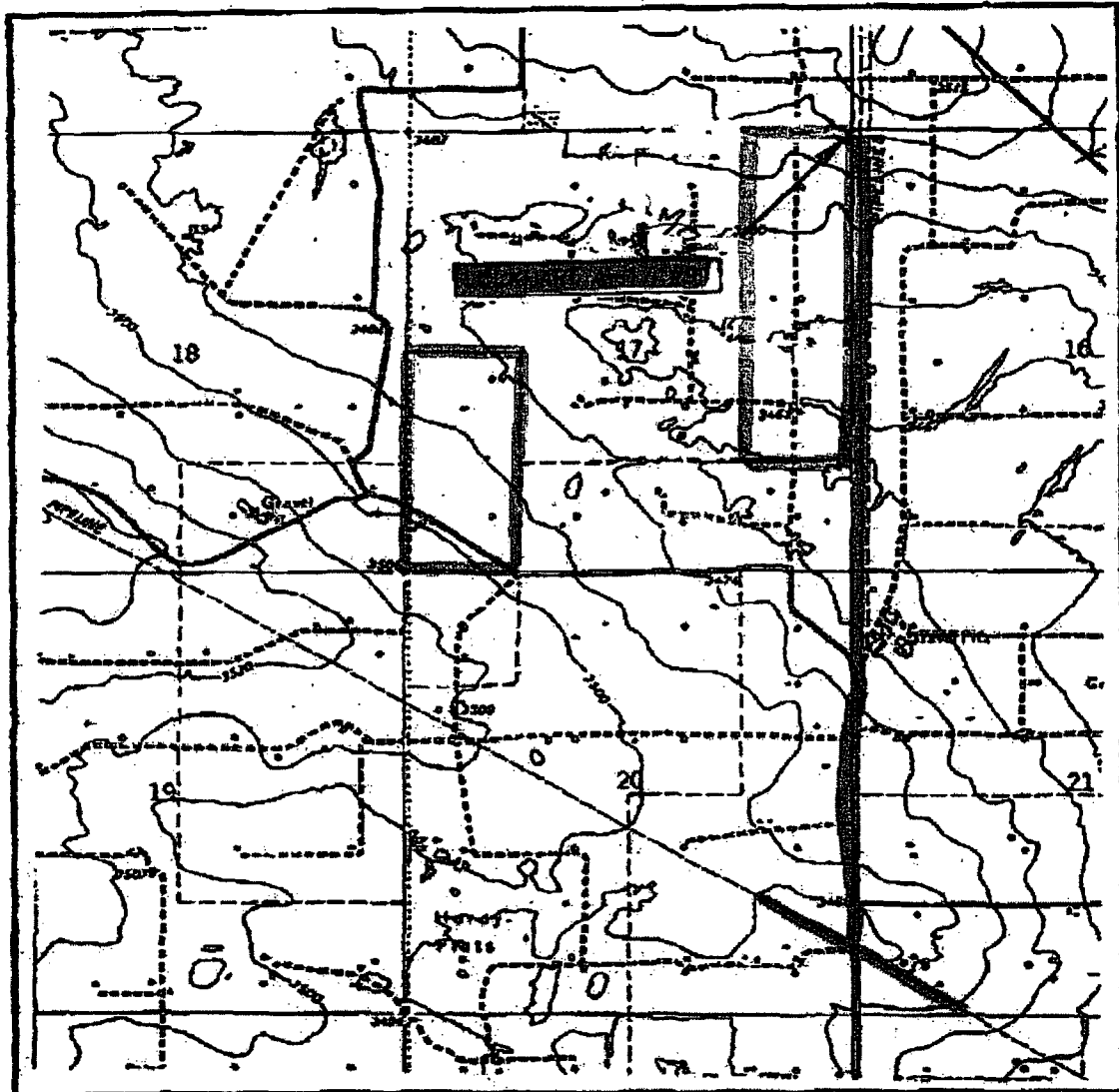
SEC. 17 TWP. 21-S RGE. 37-E  
 SURVEY N.M.P.M.  
 COUNTY LEA  
 DESCRIPTION 110' ENL & 80' FEL  
 ELEVATION 3497'  
 OPERATOR APACHE CORPORATION  
 LEASE LOCKHART A-17

JOHN WEST SURVEYING  
 HOBBS, NEW MEXICO  
 (505) 393-3117



# LOCATION VERIFICATION MAP

EXHIBIT E-2



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'  
EUNICE, N.M.

SEC. 17 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 110' FNL & 80' FEL

ELEVATION 3497'

OPERATOR APACHE CORPORATION

LEASE LOCKHART A-17

U.S.G.S. TOPOGRAPHIC MAP  
EUNICE, N.M.

JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

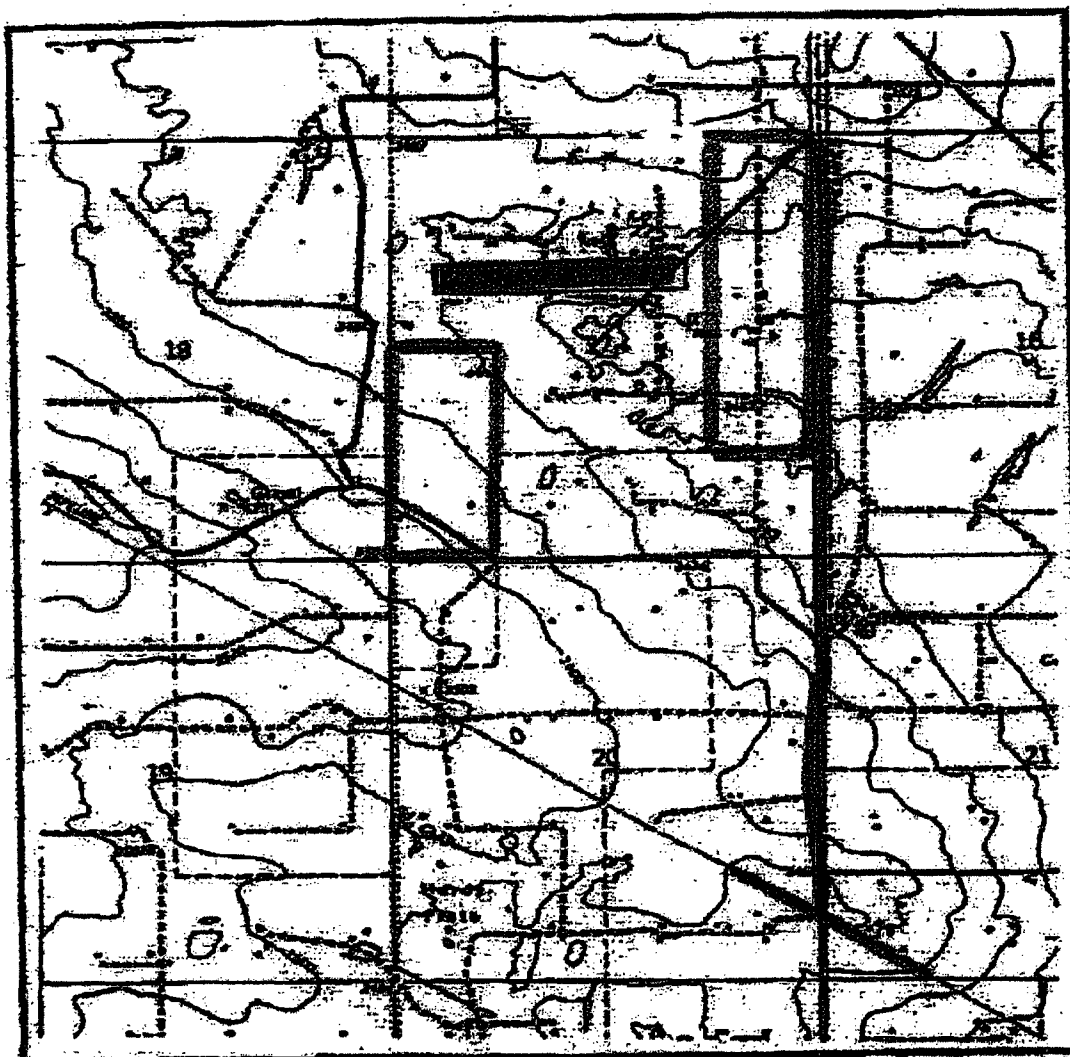
ACCESS [REDACTED]

LEASE BOUNDARY [REDACTED]



## LOCATION VERIFICATION MAP

EXHIBIT E-3



SCALE 1" = 2000'

SEC 17 TWA 21-S RCE II-E

**SURVEY** **N.M.R.M.**

COUNTY \_\_\_\_\_ LEA \_\_\_\_\_

DESCRIPTION 140 ENL & 80 FEL

ELEVATION: 1497

**OPERATOR - APACHE CORPORATION**

LEASE LOCKPORT A-17

U.S.S. TOPOGRAPHIC MAP

**EDUC: NM**

5500' CONTOUR INTERVAL: 10'  
ELINCE, N.M.  
Flow line Flow-line Route =

**CLINICAL**

Flow line

### Flow-line Route

**JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117**

## ADDRESS

## LEASE BOUNDARY



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division  
1625 N. French Dr.  
Hobbs, NM 88240

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

5. Lease Serial No.	NMLC-032096A
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA/Agreement, Name and/or No.	
8. Well Name and No.	LOCKHART A-17 #9
9. API Well No.	30-D25-36661
10. Field and Pool, or Exploratory Area	PENROSE SKELLY; GRAYBURG
11. County or Parish, State	LEA, NM

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	
2. Name of Operator <b>APACHE CORP.</b>	
3a. Address 6120 S. YALE, STE 1500 TULSA, OK 74136	3b. Phone No. (include area code) 918-491-4900
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)	

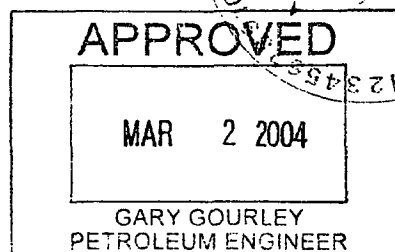
AT SURFACE	NENE 110FNL 80FEL
AT PROPOSED PROD. ZONE	NENE 110FNL 80FEL

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input checked="" type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

EXTEND TOTAL DEPTH FROM 4150' TO 4800'.



14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) <b>Michelle L. Hanson</b>		Title Engineering Tech., Drilling Dept.
Signature <i>Michelle L. Hanson</i>		Date 2/23/2004

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)



N.M. Oil Cons. Division  
1625 N. French Dr.  
Hobbs, NM 88240

Form 3160-5  
(September 2001)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

5. Lease Serial No.	NMLC-032096A
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA/Agreement, Name and/or No.	
8. Well Name and No.	LOCKHART A-17 #48-9
9. API Well No.	30-025-36661
10. Field and Pool, or Exploratory Area	PENROSE SKELLY; GRAYBURG
11. County or Parish, State	LEA, NM

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	2. Name of Operator <b>APACHE CORP</b>
3a. Address 6120 S. YALE, STE 1500 TULSA, OK 74136	3b. Phone No. (include area code) 918-491-4900
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>AT SURFACE NENE 110FNL 80FEL</b> <b>AT PROPOSED PROD. ZONE NENE 110 FNL 80FEL</b>	

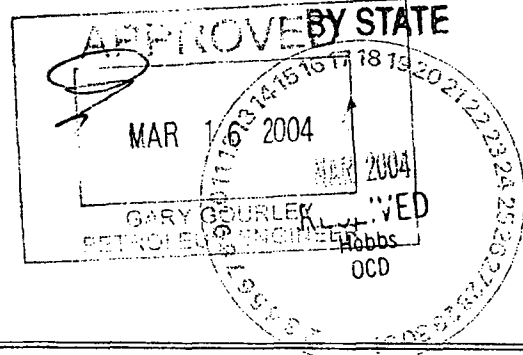
**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>ADD POOL</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

**ADD PROPOSED POOL: HARE; SAN ANDRES (GAS) (78080)**

**SUBJECT TO  
LIKE APPROVAL**



14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**Michelle Hanson**

Title **Engineering Tech., Drlg. Dept.**

Signature

*Michelle Hanson*

Date **3/11/2004**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

**GW**



**New Mexico Oil Conservation Division, District I**  
**1625 N. French Drive**  
**Hobbs, NM 88240**

Form 3160-5  
 (September 2001)

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT

FORM APPROVED  
 OMB No. 1004-0135  
 Expires January 31, 2004

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

**APACHE CORPORATION**

3a. Address

**6120 S. YALE, STE. 1500**

3b. Phone No. (include area code)

**918-491-4980**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

**AT SURFACE NENE 110FNL 80 FEL UNIT A**  
**AT PROPOSED PROD. ZONE NENE 110FNL 80 FEL**

5. Lease Serial No.

**NMLC032096A**

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

**LOCKHART A-17 9**

9. API Well No.

**30-025-36661**

10. Field and Pool, or Exploratory Area

**PENROSE SKELLY**

11. County or Parish, State

**LEA, NM**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other SPUD, SURF. CSG., TD, LOG, PROD. CSG.
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

6/5/2004 MIRU CAPSTAR RIG # 8 SPUD 12 1/4" HOLE - DRILL TO 405 CIRCULATE SURVEY @ 405-0.5 POH W/ BIT RIH 9 JTS. 408.47' 8 5/8" 24# J55 ST&C CSG. W/ 5 CENTRALIZERS WASH TO BOTTOM - CIRCULATE BJ CMT. SHOE @ 405 W/ 325 SX CLASS C + 2% CACL + 1/8# CF = 78 BBLS. 14.8# SLURRY W/ 1.35 YIELD - DISPLACE PLUG TO 375 W/ 24 BFW - CIRC. 99 SX. CMT. TO PIT WOC CUT OFF CSG. - WELD ON HEAD NU BOP EQUIP. WAIT ON WELDER - WELD MUD CROSS TEST BOP EQUIP. 1500# START RIH W/ BIT

6/6/2004- DRILL & SURVEY FROM 405-4350. CIRCULATE FOR LOGS SURVEY @ 4344= 0.75 POH W/ BIT RIH 10 JTS. 4344.00' 8 5/8" 24# J55 ST&C CSG. W/ 5 CENTRALIZERS WASH TO BOTTOM - CIRCULATE BJ CMT. SHOE @ 405 W/ 325 SX CLASS C + 2% CACL + 1/8# CF = 78 BBLS. 14.8# SLURRY W/ 1.35 YIELD - DISPLACE PLUG TO 375 W/ 24 BFW - CIRC. 99 SX. CMT. TO PIT WOC CUT OFF CSG. - WELD ON HEAD NU BOP EQUIP. WAIT ON WELDER - WELD MUD CROSS TEST BOP EQUIP. 1500# START RIH W/ BIT

RELEASE RIG @ 4:00 AM 6-10-2004

ACCEPTED FOR RECORD

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

**LANA WILLIAMS**

Title **DRILLING CLERK II**

Signature

*Lana Williams*

Date

*6/17/04*

**JUN 29 2004**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

**GARY GOURLEY**  
**PETROLEUM ENGINEER**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title

Date

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

**GWW**

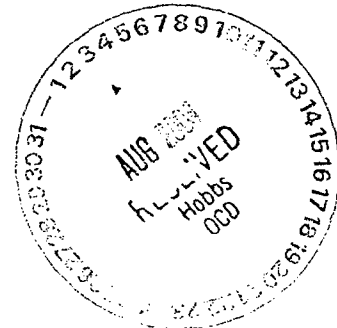


Apache Corporation  
6120 S. Yale Ste 1500  
Tulsa, OK 74136

Lockhart A-17 #9  
Lea County New, Mexico

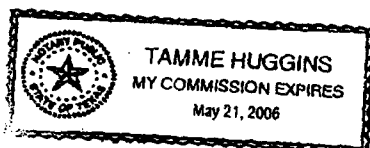
A-17-215-37e  
110/W 4 80/E  
30-025-36661

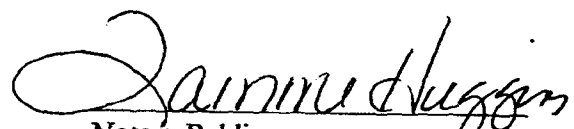
405	4.05	1/2	0.88	3.54	3.54
857	4.52	1	1.75	7.91	11.45
1291	4.34	3/4	1.31	5.70	17.15
1729	4.38	3/4	1.31	5.75	22.90
2167	4.38	1 3/4	3.06	13.41	36.31
2628	4.61	1	1.75	8.07	44.38
3064	4.36	1 1/4	2.19	9.54	53.92
3501	4.37	1	1.75	7.65	61.57
3939	4.38	1/2	0.88	3.83	65.40
4350	4.11	3/4	1.31	5.39	70.79



  
Michael Roghair - General Manager

The attached instrument was acknowledged before me on the 14<sup>th</sup> day of June, 2004 by  
Michael Roghair - General Manager, CapStar Drilling, L.P.



  
Notary Public





## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

811 South First, Artesia, NM 88210

## District III

1000 Rio Brazos Rd., Aztec, NM 87410

## District IV

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

State of New Mexico  
Energy, Minerals and Natural ResourcesOIL CONSERVATION DIVISION  
1220 South St. Francis Drive  
Santa Fe, NM 87505Form C-104  
Revised June 1, 2000Submit to Appropriate District Office  
5 Copies☐ AMENDED REPORT

## I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

Operator Name and Address <b>APACHE CORPORATION 2000 POST OAK BLVD., SUITE 100 HOUSTON, TEXAS 77056-4400</b>		OGRID Number <b>000873</b>
API Number <b>30-025-36661</b>		Reason for Filing Code / Effective Date <b>NW - 6/21/04</b>
Property Code <b>24430</b>	Pool Name <b>Penrose Skelly; Grayburg</b>	Pool Code <b>50350</b>
Property Name <b>Lockhart A-17</b>		Well Number <b>9</b>

## II. Surface Location

Ul or lot no. <b>A</b>	Section <b>17</b>	Township <b>21S</b>	Range <b>37E</b>	Lot. Idn	Feet from the <b>110</b>	North/South line <b>North</b>	Feet from the <b>80</b>	East/West line <b>East</b>	County <b>Lea</b>
---------------------------	----------------------	------------------------	---------------------	----------	-----------------------------	----------------------------------	----------------------------	-------------------------------	----------------------

## 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
Lse Code <b>F</b>	Producing Method Code <b>P</b>	Gas Connection Date <b>6/21/2004</b>	C-129 Permit Number	C-129 Effective Date	C-129 Expiration Date				

## III. Oil and Gas Transporters

16 Transporter OGRID	19 Transporter Name and Address	20 POD	21 O/G	22 POD ULSTR Location and Description
022507	Equilon Pipeline Co. LLC 777 Walker Street Houston, Texas 77002	0765910	O	H, Sec. 17, T-21S, R-37E
024650	Dynegy Midstream Services 6 Desta Drive, Suite 3300 Midland, Texas 79705	0765930	G	H, Sec. 17, T-21S, R-37E

## IV. Produced Water

23 POD <b>0765950</b>	24 POD ULSTR Location and Description <b>H, Sec. 17, T-21S, R-37E</b>
--------------------------	--

## V. Well Completion Data

25 Spud Date <b>6/11/2004</b>	26 Ready Date <b>6/21/2004</b>	27 TD <b>4350</b>	28 PBD <b>4302</b>	29 Perforations <b>3807-3994</b>	30 DHC, MC
31 Hole Size	32 Casing & Tubing Size	33 Depth Set	34 Sacks Cement		
<b>12-1/4</b>	<b>8-5/8</b>	<b>405</b>	<b>325 sx / Circulated to surface</b>		
<b>7-7/8</b>	<b>5-1/2</b>	<b>4350</b>	<b>1000 sx / TOC @ 140' (CBL)</b>		
	<b>2-7/8</b>	<b>4073</b>			

## VI. Well Test Data

35 Date New Oil <b>6/21/2004</b>	36 Gas Delivery Date <b>6/21/2004</b>	37 Test Date <b>7/20/2004</b>	38 Test Length <b>24</b>	39 Tbg. Pressure	40 Csg. Pressure
41 Choke Size	42 Oil <b>56</b>	43 Water <b>160</b>	44 Gas <b>159</b>	45 AOF	46 Test Method <b>Pumping</b>

47 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: *Kara Coday*  
Printed Name: **Kara Coday**  
Title: **Sr. Engineering Technician**  
Date: **7/23/2004** Phone: **713-296-6338**

Approved by: *Paul J. Blaney*

Title:

Approval Date:

OIL CONSERVATION DIVISION

PETROLEUM ENGINEER

48 If this is a change of operator fill in the OGRID number and name of the previous operator

OCT 05 2004

Previous Operator Signature:

Printed Name

Title

Date



# New Mexico Oil Conservation Division, District I

1625 N. French Drive

Albuquerque, NM 87240

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED

OMB NO. 1004-1037

Expires: November 30, 2000

### 1a. Type of Well:

☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other

### b. Type of Completion:

☒ New Well ☐ Workover ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.  
☐ Other

### 2. Name of Operator

Apache Corporation

### 3. Address

6120 South Yale, Suite 1500 Tulsa, Oklahoma 74136

### 3a. Phone No. (include area code)

918-491-4957

### 4. Location of Well (Report location clearly and in accordance with Federal requirements)\*

At surface 110' FNL & 80' FEL, Unit A

At top prod. interval reported below

At total depth

### 14. Date Spudded

06/11/04

### 15. Date T.D. Reached

06/17/04

### 16. Date Completed

☐ D & A

☒ Ready to Produce

### 17. Elevations (DF, RKB, RT, GL) \*

3497' GL

### 18. Total Depth:

MD 4350'

### 19. Plug Back T.D.:

MD 4302'

### 20. Depth Bridge Plug Set:

MD

### 21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

CSL, SD/DSN

### 22. Was well cored?

☒ No

☐ Yes (Submit analysis)

### Was DST run?

☒ No

☐ Yes (Submit report)

### Directional Survey?

☒ No

☐ Yes (Submit copy)

### 23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
12-1/4	8-5/8	26.5	0	405		325	78	Circ.	
7-7/8	5-1/2	17#	405	4350		1000	362	CBL	

### 24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2-7/8	4073							

### 25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
Grayburg	3807-3994		3807-3994	4"	26	Producing

### 27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
3807-3994	Acidize w/ 3500 gals 15% HCL
3807-3994	Frac w/ 28,854 gals gel & 100,000# 20/40 sand

### 28. Production - Interval A

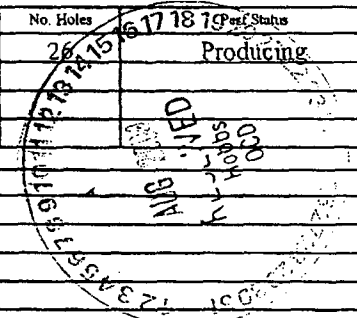
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
6/21/04	7/20/2004	24	→	56	159	160	37.5		Pumping
Choke Size	Tubing Pressure Flwg. SI	Casing Pressure	24 Hour Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
			→				2839		Producing

### 28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tubing Pressure Flwg. SI	Casing Pressure	24 Hour Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
			→						

(See instructions and spaces for additional data on reverse side)

DAVID R. GLASS  
PETROLEUM ENGINEER



K2



## 28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tubing Pressure Flwg. SI	Casing Pressure	24 Hour Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
			→						

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tubing Pressure Flwg. SI	Casing Pressure	24 Hour Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
			→						

## 29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, Etc.	Name	Top Measured Depth
				Rustler	1283
				Yates	2685
				Seven Rivers	2901
				Queen	3449
				Grayburg	3735
				San Andres	4004

## 32. Additional remarks (include plugging procedure):

## 33. Mark enclosed attachments:

- ☒ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ Geologic Report
 ☐ DST Report
 ☐ Directional Survey
- ☐ Sundry Notice / Plugging / Cement Verification
 ☐ Core Analysis
 ☒ Other C-104 & Deviation Report

## 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) Kara CodayTitle Sr. Engineering TechnicianSignature Kara CodayDate 7/23/2004





# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**  
Governor

March 25, 2004

**Joanna Prukop**  
Cabinet Secretary  
Acting Director  
Oil Conservation Division

Apache Corporation  
c/o James Bruce  
P. O. Box 1056  
Santa Fe, New Mexico 87504

## *Administrative Order NSL-5024 (SD)*

Dear Mr. Bruce:

Reference is made to the following: (i) your application (*administrative application reference No. pMES0-408539665*) dated February 6, 2004 filed on behalf of the operator, Apache Corporation ("Apache"); (ii) our telephone conversation late Monday afternoon, February 23, 2004; (iii) your e-mail response on February 23, 2004; (iv) Ms. Cindy McGee's e-mail with attachments on Tuesday, February 24, 2004; (v) your e-mail correspondence with me on Wednesday, February 25, 2004; (vi) our telephone conversation on Thursday, February 26, 2004 concerning Occidental Permian Partnership's interest, or lack thereof, in this application; (vii) your e-mail and telefax responses Friday morning, February 27, 2004; (viii) your e-mail to me Tuesday morning March 23, 2004 checking on the status of Apache's remaining applications in this area; and (ix) the Division's records in Santa Fe, including the files on Division Administrative Orders NSL-5007 (SD), NSL-4956 (SD), and NSL-4954 (SD): all concerning Apache Corporation's request for an unorthodox oil well location within a standard 40-acre oil spacing and proration unit comprising the NE/4 NE/4 (Unit A) of Section 17, Township 21 South, Range 37 East, NMPM, Penrose Skelly (Grayburg) Pool (50350), Lea County, New Mexico.

### **The Division Finds That:**

(1) All of Section 17 is within the Penrose Skelly (Grayburg) Pool; an oil pool governed under Division Rule 104.B (1), which provides for 40-acre oil spacing and proration units and requires wells be located no closer than 330 feet to the outer boundary of such unit.

(2) The area comprising the E/2 NE/4 (Units A and H) and the NE/4 SE/4 (Unit I) of Section 17 is a single federal lease (Lockhart "A-17") issued by the U. S. Bureau of Land Management (U. S. government lease No. NM-032096-A) with common ownership in which: (i) Apache and Chevron U.S.A., Inc. ("Chevron") each own undivided operating rights; and (ii) Apache is the leasehold operator.

(3) The standard 40-acre oil spacing and proration unit in the Penrose Skelly (Grayburg) Pool comprising the NE/4 NE/4 (Unit A) of Section 17 within this lease does not currently have a producing well; however, from 1972 to April, 1999 Apache's Lockhart "A-17" Well No. 4 (API No. 30-025-06639), located at a standard oil well location 660 feet from the North and East lines of Section 17 was completed in and produced from the Penrose Skelly (Grayburg) Pool.

(4) Apache now seeks to drill its Lockhart "A-17" Well No. 9 as a replacement Grayburg oil well within this 40-acre unit at an unorthodox oil well location 110 feet from the North line and 80 feet from the East line of Section 17.



(5) The 958.25-acre area in Lea County, New Mexico comprising the SW/4 NE/4 and NW/4 SW/4 of Section 13, Township 20 South, Range 37 East, NMPM; Lot 1 of Section 30, Township 20 South, Range 38 East, NMPM; and Lots 3 and 6 of Section 4, the NE/4 SE/4 and S/2 SE/4 of Section 6; the E/2 SW/4 and SE/4 of Section 8; and the E/2 NW/4 and S/2 of Section 9, all in Township 21 South, Range 37 East, NMPM, is a single federal lease (Hawk "B-1") issued by the U. S. Bureau of Land Management (U. S. government lease No. NM-90161) with common ownership in which: (i) Apache, Chevron, and BP America Production Company ("BP") each own undivided operating rights; and (ii) Apache is the leasehold operator. The two-affected standard 40-acre Grayburg oil spacing and proration units to the north in Sections 8 and 9, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico that Apache's proposed Lockhart "A-17" Well No. 9 is encroaching are:

(a) the SW/4 SW/4 (Unit M) of Section 9, which is currently dedicated to Apache's: (i) existing Hawk "B-1" Well No. 19 (API No. 30-025-35796), located at a standard oil well location 660 feet from the South line and 425 feet from the West line of Section 9; and (ii) proposed Hawk "B-1" Well No. 40 (API No. 30-025-36533), to be located at an unorthodox infill oil well location [approved by Division Administrative Order NSL-4956 (SD), dated October 31, 2003, as corrected by order dated March 1, 2004) 1310 feet from the South line and 1280 feet from the West line of Section 9; and

(b) the SE/4 SE/4 (Unit P) of Section 8, which is currently dedicated to Apache's: (i) Hawk "B-1" Well No. 18 (API No. 30-025-35795), located at a standard oil well location 760 feet from the South line and 840 feet from the East line of Section 8; and (ii) proposed Hawk "B-1" Well No. 39 (API No. 30-025-36532), to be located at an unorthodox infill oil well location [approved by Division Administrative Order NSL-4954 (SD), dated October 31, 2003) 1200 feet from the South line and 80 feet from the East line of Section 8.

(6) The NW/4 of Section 16, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico is a single state lease (State "C" Tract 12) issued by the New Mexico State Land Office (State Lease No. B-01557-1) with common ownership in which Apache is the lessee of record and leasehold operator. The affected standard 40-acre Grayburg oil spacing and proration unit to the east, being the NW/4 NW/4 (Unit D) of Section 16, in which the proposed Lockhart "A-17" Well No. 9 is encroaching, is dedicated to the two following described Apache operated wells:

(a) the existing State "C" Tract 12 Well No. 8 (API No. 30-025-35515), located at a standard oil well location 660 feet from the North line and 810 feet from the West line of Section 16; and



(b) its proposed State "C" Tract 12 Well No. 16 (API No. 30-025-36618), to be located at an unorthodox infill oil well location [approved by Division Administrative Order NSL-5007 (SD), dated March 1, 2004) 110 feet from the North line and 1310 feet from the West line of Section 16.

(7) This request is based on geologic and engineering reasons in that this location is approximately equidistance to other offsetting Penrose Skelly (Grayburg) oil producers within the immediate area.

(8) Apache, BP, Chevron, the New Mexico State Land Office, and the U. S. Bureau of Land Management have entered into a "cooperative lease/well agreement" providing for the allocation of proceeds of Penrose Skelly (Grayburg) oil production from Apache's proposed Lockhart "A-17" Well No. 9 in the following manner:

(a) 43.17% to be attributed to the subject Lockhart "A-17" federal lease (U. S. government lease No. NM-032096-A);

(b) 33.10% to be attributed to the offsetting State "C" Tract 12 lease (State lease No. B-01557-1); and

(c) 23.73% to be attributed to the offsetting Hawk "B-1" federal lease (U. S. government lease No. NM-90161).

(9) This allocation formula for the proceeds from Apache's proposed Lockhart "A-12" Well No. 9 serves to benefit all mineral interests within the Penrose Skelly (Grayburg) Pool to be impacted by this well's drainage.

(10) Approval of this application is in the best interest of conservation, will serve to prevent waste, protects correlative rights, exhibits sound engineering practices, and allows for the recovery of additional reserves that might not otherwise be produced.

**It Is Therefore Ordered That:**

(1) Pursuant to Division Rule 104.F (2), of the New Mexico Oil Conservation Division's ("Division") Rules and Regulations, the administrative application of Apache Corporation ("Apache") (*administrative application reference No. pMES0-408539665*) for its proposed Lockhart "A-17" Well No. 9 to be drilled at an unorthodox oil well location 110 feet from the North line and 80 feet from the East line of Section 17, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, and completed in the Penrose Skelly (Grayburg) Pool (50350), is hereby approved.



(2) The distribution of proceeds from Penrose Skelly (Grayburg) oil production from Apache's proposed Lockhart "A-17" Well No. 9 are to be allocated in the following manner:

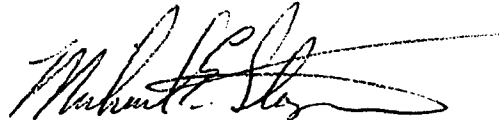
(a) 43.17% to be attributed to the subject Lockhart "A-17" federal lease (U. S. government lease No. NM-032096-A) located in Section 17, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico;

(b) 33.10% to be attributed to the offsetting State "C" Tract 12 lease (State lease No. B-01557-1) located in Section 16, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico; and

(c) 23.73% to be attributed to the offsetting Hawk "B-1" federal lease (U. S. government lease No. NM-90161) located in Sections 8 and 9, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



MICHAEL E. STOGNER  
Engineer/Hearing Officer

MS/mes

cc: New Mexico Oil Conservation Division - Hobbs  
New Mexico State Land Office - Santa Fe  
U. S. Bureau of Land Management -- Roswell



**STATE OF NEW MEXICO  
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:**

**CASE NO. 13256  
ORDER NO. R-12190**

**APPLICATION OF APACHE CORPORATION FOR CONTRACTION OF THE  
HARE-SAN ANDRES GAS POOL, EXPANSION OF THE EAST HARE-SAN  
ANDRES POOL, AND SPECIAL POOL RULES FOR THE EAST HARE-SAN  
ANDRES POOL, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on April 29, 2004, at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 12<sup>th</sup> day of August, 2004, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

**FINDS THAT:**

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) Apache Corporation ("applicant"), seeks an order:

(a) Contracting the horizontal boundaries of the Hare-San Andres Gas Pool (78080) by deleting the following acreage;

Township 21 South, Range 37 East, NMPM  
Section 10: S/2

(b) Expanding the horizontal boundaries of the East Hare-San Andres Pool (96601) by adding thereto the following acreage; and



Township 21 South, Range 37 East, NMPM

Section 9: S/2  
Section 10: SW/4  
Section 16: NW/4

(c) Creating Special Pool Rules for the East Hare-San Andres Pool, providing for; (i) a gas-oil ratio of 5000 cubic feet of gas for each barrel of oil produced, and (ii) all other rules to comply with statewide rules.

(3) The Hare-San Andres Gas Pool was created by Division order No. R-4423 in Case No. 4848, issued on November 1, 1972, and currently covers the following acreage:

Township 21 South, Range 37 East, NMPM

Section 10: S/2  
Section 15: W/2  
Section 21: S/2  
Section 22: NE/4 and W/2  
Section 27: W/2  
Section 28: S/2

The Hare-San Andres Gas Pool was discovered by the Shell Oil Company Turner Well No. 16, located in Unit M of Section 22, Township 21 South, Range 37 East, NMPM. It was completed in the San Andres formation on June 2, 1972, with the top perforation at 4004 feet. The pool has no special pool rules and is therefore being developed on statewide rules with 160-acre gas spacing units and only one well allowed per unit.

(4) The East Hare-San Andres Pool was created by Division order No. R-10776 in Case No. 11737 issued on February 28, 1997, and currently covers the following acreage:

Township 21 South, Range 37 East, NMPM

Section 10: SE/4



The East Hare-San Andres Pool was discovered by the Exxon Corporation New Mexico "PO" State Well No. 1 located in Unit O of Section 10, Township 21 South, Range 37 East, NMPM. It was completed in the San Andres formation on October 13, 1996, with the top perforation at 4,022 feet. The pool has no special pool rules and is therefore being developed on statewide rules with 40-acre oil proration units, 40-acre depth bracket oil discovery allowable, and a 2,000:1 gas-oil ratio.

(5) Notice was provided to operators within the East Hare-San Andres Pool and within one mile surrounding the pool. No one appeared at the hearing or otherwise opposed this application.

(6) Exxon Mobil Corporation ("ExxonMobil") operates a San Andres gas well located within the SW/4 of Section 10 and within the current boundaries of the Hare-San Andres Gas Pool. The applicant provided testimony that the entire S/2 of Section 10 is a single State of New Mexico lease with identical ownership and Exxon would therefore not be affected by switching the SW/4 of Section 10 from the Hare-San Andres Gas Pool to the East Hare-San Andres Pool. Division records indicate that ExxonMobil's well has not in the past produced enough gas, on the average, to be restricted in the future by the applicant's proposed 5,000:1 gas-oil ratio limitation.

(7) The applicant provided geological and engineering testimony as follows:

(a) The productive portion of the San Andres reservoir in this area does not behave in a conventional manner, with gas over oil, and oil over water. Some wells will produce primarily gas even though they are lower in structure than offsetting oil producers.

(b) The San Andres reservoir provides water supply wells for the deeper Drinkard formation waterflood in this area. Some of these water supply wells actually flow gas at the same time as water is being pumped and are classified as gas wells.

(c) Oil wells in this area producing from the Grayburg formation, which is stratigraphically higher than the San Andres, are spaced on 40-acres. If this application is approved, these existing Grayburg wells can be deepened without obtaining Division approval for rule exceptions, the San Andres formation can be developed, and the wells possibly downhole commingled.



(d) The producing lenses in the San Andres formation are at various stages of pressure depletion. Original reservoir pressure was approximately 1,700-psi and the pressure in some wells is still above the bubble point.

(e) Ultimate primary oil and gas production from this reservoir will not be decreased as a result of allowing a 5,000:1 or higher producing gas-oil ratio. The applied for 5,000:1 gas-oil ratio limit is consistent with the special pool rules existing on other San Andres oil pools in this area.

(f) To aid in determining the limits of the East Hare-San Andres Pool as applied for herein, the applicant has drilled three delineation wells, each in the center of a possible 160-acre San Andres gas spacing unit. One well is in the NW/4 of Section 16, one is in the SW/4 of Section 9, and one is in the SE/4 of Section 9. Each of these wells is an infill location Grayburg well as well as standard location gas wells. If these had tested as gas wells in the San Andres, they would have been the only San Andres wells allowed within each of these 160-acre units.

(8) Implementation of the proposed gas pool contraction, oil pool expansion, and 5,000:1 gas-oil ratio limit for the oil pool, will allow the operators of wells completed in the San Andres formation in this area the opportunity to recover additional hydrocarbons, prevent waste, and will protect correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Apache Corporation for the following three items is hereby approved:

(a) The following acreage is deleted from the boundaries of the Hare-San Andres Gas Pool (78080):

Township 21 South, Range 37 East, NMPM  
Section 10: S/2



(b) The following acreage is added to the boundaries of the East Hare-San Andres Pool (96601):

Township 21 South, Range 37 East, NMPM

Section 9: S/2  
Section 10: SW/4  
Section 16: NW/4

(c) The "Special Pool Rules for the East Hare-San Andres Pool," are hereby established and shall read in their entirety as follows:

SPECIAL POOL RULES  
FOR THE  
EAST HARE-SAN ANDRES POOL

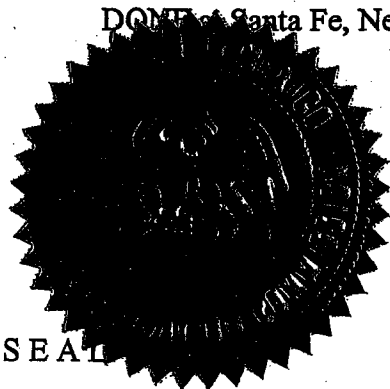
RULE 1. Each well completed in or recompleted in the East Hare-San Andres Pool, or in the San Andres formation within one mile thereof and not nearer to or within the limits of another designated San Andres pool, shall be spaced, drilled, operated, and produced in accordance with the special rules hereinafter set forth.

RULE 2. The limiting gas-oil ratio shall be 5,000 cubic feet of gas per barrel of oil.

RULE 3. Statewide rules shall govern this pool except as stated in RULE 2 above.

(2) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

Done at Santa Fe, New Mexico, on the day and year hereinabove designated.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Mark E. Fesmire".

MARK E. FESMIRE, P.E.  
Director