



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**  
Governor

March 30, 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-5031 (SD)*

Dear Mr. Bruce:

Reference is made to the following: (i) your application (*administrative application reference No. pMES0-408557039*) dated February 6, 2004 filed on behalf of the operator, Apache Corporation ("Apache"); (ii) your e-mail on Monday morning, February 23, 2004; (iii) our telephone conversation late Monday afternoon, February 23, 2004; (iv) our e-mail correspondence on Wednesday, February 25, 2004; (v) your e-mail on Tuesday morning March 23, 2004 checking on the status of Apache's remaining applications in this area; (vi) my e-mail on Friday afternoon, March 26, 2004 requesting additional detailed information concerning the fee lease involved in this matter; (vii) your reply by letter, with attachments, on March 30, 2004; (viii) our e-mail correspondence on Tuesday afternoon, March 30, 2004; and (ix) the Division's records in Santa Fe: all concerning Apache Corporation's request for an unorthodox "infill" oil well location within an existing standard 40-acre oil spacing and proration unit comprising the NE/4 SW/4 (Unit K) of Section 9, Township 21 South, Range 37 East, NMPM, Penrose Skelly (Grayburg) Pool (50350), Lea County, New Mexico.

**The Division Finds That:**

(1) All of Section 9 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 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 U.S.A., Inc. ("Chevron"), and BP America Production Company ("BP") each own undivided operating rights; and (ii) Apache is the leasehold operator.

(3) This 40-acre Grayburg unit is currently dedicated to Apache's Hawk "B-1" Well No. 26 (API No. 30-025-35799) located at a standard oil well location 1840 feet from the South line and 2000 feet from the West line of Section 9.

(4) Apache now seeks to drill its Hawk "B-1" Well No. 41 at an unorthodox infill oil well location within this 40-acre Grayburg unit 2590 feet from the South line and 2630 feet from the West line of Section 9.

(5) The 320-acre area in Lea County, New Mexico comprising the SE/4 SW/4, NE/4 SE/4, and S/2 SE/4 of Irregular Section 4, and the NE/4 of Section 9, all in Township 21 South, Range 37 East, NMPM, is a single fee lease (Southland Royalty "A" fee lease) with common ownership in which Apache is the single working interest owner and is the designated leasehold operator.

(6) The affected standard 40-acre Grayburg oil spacing and proration unit to the northeast in Unit "G" (SW/4 NE/4) of Section 9 that Apache's proposed Hawk "B-1" Well No. 41 is encroaching is currently dedicated to Apache's Southland Royalty "A" Well No. 10 (API No. 30-025-35514), located at a standard oil well location 1830 feet from the North line and 1980 feet from the East line of Section 9.

(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, 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 Hawk "B-1" Well No. 41 in the following manner:

- (a) 80.05% to be attributed to the subject Hawk "B-1" federal lease (U. S. government lease No. NM-90161); and
- (b) 19.95% attributed to the offsetting Southland Royalty "A" fee lease.

(9) This allocation formula for the proceeds from Apache's proposed Hawk "B-1" Well No. 41 serves to benefit all mineral interests (both cost bearing and non-cost bearing 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. pMES0-408557039*) for its proposed Hawk "B-1" Well No. 41 to be drilled at an unorthodox infill oil well location 2590 feet from the South line and 2630 feet from the West line (Unit K) of Section 9, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, and completed in the Penrose Skelly (Grayburg) Pool (50350), is hereby approved.

(2) For the Division's production reporting, prorationing, and well spacing purposes, Grayburg oil production from the above-described Hawk "B-1" Well No. 41 is to be simultaneously dedicated, with Apache's existing Apache's Hawk "B-1" Well No. 26 (API No. 30-025-35799) located at a standard oil well location 1840 feet from the South line and 2000 feet from the West line of Section 9, to the NE/4 SW/4 (Unit K) of Section 9, being a standard 40-acre oil spacing and proration unit in the Penrose Skelly (Grayburg) Pool.

(3) The distribution of proceeds from Penrose Skelly (Grayburg) oil production from Apache's proposed Hawk "B-1" Well No. 41 are to be allocated in the following manner:

- (a) 80.05% to be attributed to the subject Hawk "B-1" federal lease (U. S. government lease No. NM-90161) located in Section 9; and
- (b) 19.95% attributed to the offsetting Southland Royalty "A" fee lease also located in Section 9.

(4) 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



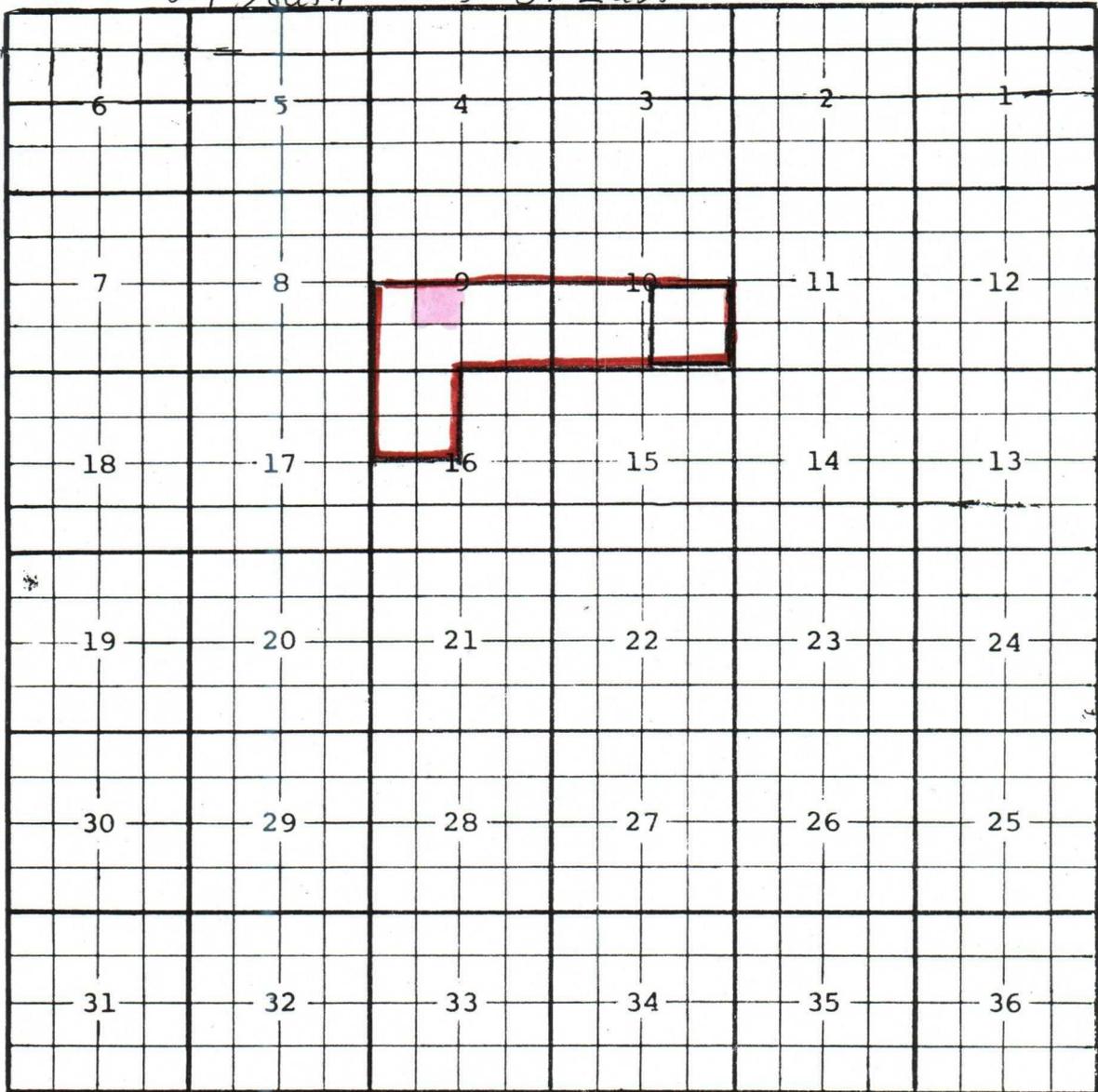
MICHAEL E. STOGNER  
Engineer/Hearing Officer

MS/mes

cc: New Mexico Oil Conservation Division - Hobbs  
U. S. Bureau of Land Management - Roswell  
U. S. Bureau of Land Management - Carlsbad

County Lea Pool East Hare-San Andres

TOWNSHIP 21 South Range 37 East NMPM



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

Ext: SE<sup>1</sup>/<sub>2</sub> Sec. 9, SE<sup>1</sup>/<sub>4</sub> Sec. 10, NW<sup>1</sup>/<sub>4</sub> Sec. 16 (R-12190, 8-12-94)

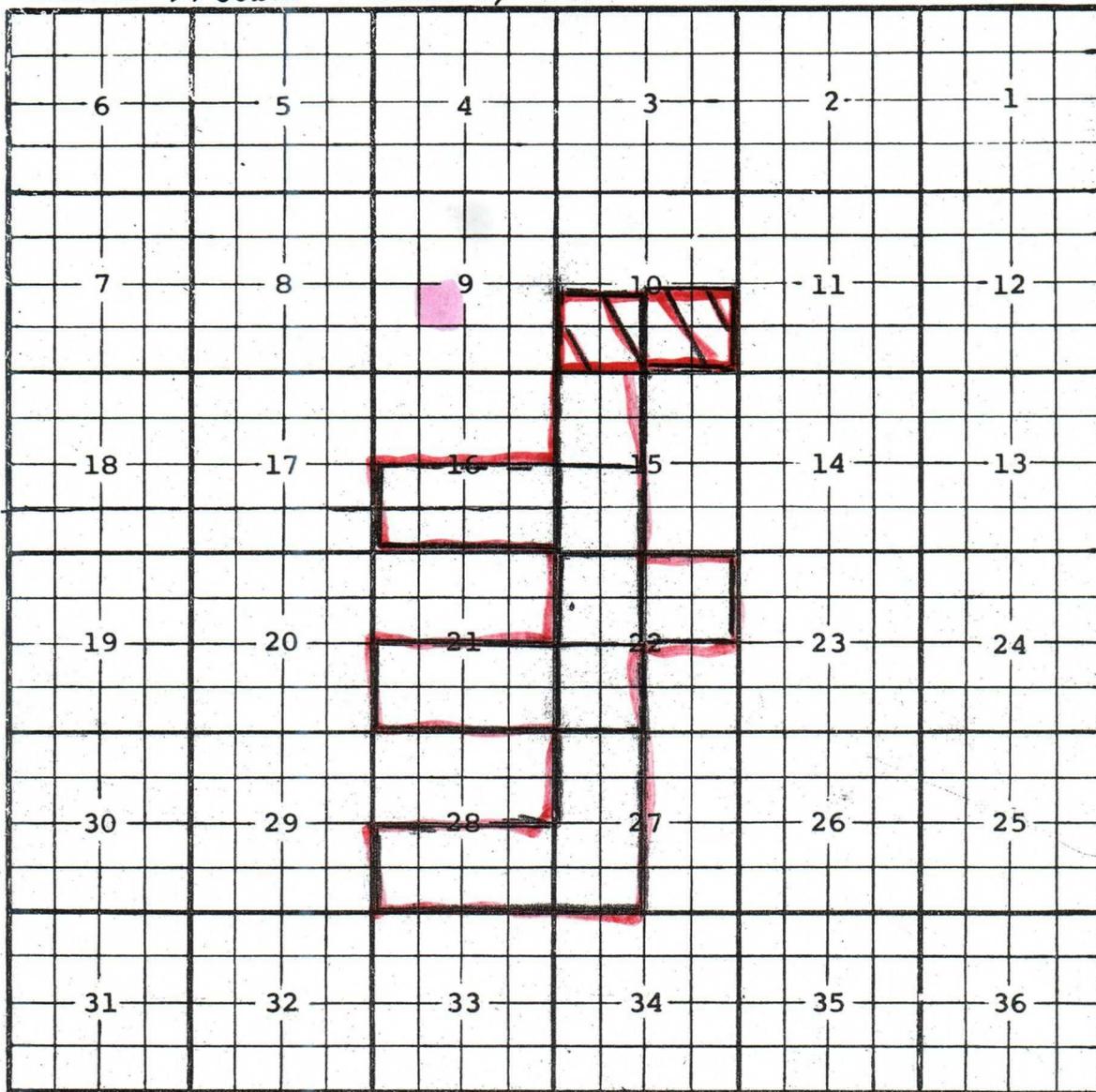
COUNTY *Lea*

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:  $\frac{1}{2}$  Sec 27,  $\frac{1}{2}$  Sec 28 (R-4809, 6-18-74)

Ext:  $\frac{1}{2}$  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:  $\frac{1}{2}$  Sec. 16 (R-11116, 1-7-99) Delete  $\frac{1}{2}$  Sec. 10 (R-12190, 8-12-04)

# New Mexico Oil Conservation Division, District I

1625 N. French Drive  
Hobbs, NM 88240

Form 3160-4  
(August 1999)

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

<p>1a. Type of Well:  <input checked="" type="checkbox"/> Oil Well      <input type="checkbox"/> Gas Well      <input type="checkbox"/> Dry      <input type="checkbox"/> Other</p> <p>b. Type of Completion:  <input checked="" type="checkbox"/> New Well      <input type="checkbox"/> Workover      <input type="checkbox"/> Deepen      <input type="checkbox"/> Plug Back      <input type="checkbox"/> Diff. Resvr.  <input type="checkbox"/> Other</p>	<p>5. Lease Serial No. NM-90161</p> <p>6. If Indian, Allottee or Tribe Name</p> <p>7. Unit or CA Agreement Name and No.</p> <p>8. Lease Name and Well No. Hawk B-1 #41</p> <p>9. API Well No. 30-025-36664</p>
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<p>2. Name of Operator Apache Corporation</p> <p>3. Address 6120 S. Yale, Suite 1500, Tulsa, OK 74136</p>	<p>3a. Phone No. (include area code) 918-491-4957</p>	<p>10. Field and Pool, or Exploratory Penrose Skelly; Grayburg</p>
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<p>4. Location of Well (Report location clearly and in accordance with Federal requirements)*                  At surface: 2590' FSL, 2630' FWL, Unit K (NE/4, SW/4)</p> <p>At top prod. interval reported below</p> <p>At total depth</p>	<p>11. Sec., T., R., M. or Block and Survey or Area Sec. 9, T-21S, R37E</p> <p>12. County or Parish Lea Co.</p> <p>13. State NM</p>
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<p>14. Date Spudded 5/13/2004</p>	<p>15. Date T.D. Reached 5/22/2004</p>	<p>16. Date Completed <input type="checkbox"/> D &amp; A      <input checked="" type="checkbox"/> Ready to Produce 06/03/04</p>	<p>17. Elevations (DF, RKB, RT, GL)* 3487' GL</p>
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<p>18. Total Depth: MD 4350' TVD</p>	<p>19. Plug Back T.D.: MD 4350' TVD</p>	<p>20. Depth Bridge Plug Set: MD TVD</p>
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<p>21. Type Electric &amp; Other Mechanical Logs Run (Submit copy of each) CSL, DSN-SDL</p>	<p>22. Was well cored? <input checked="" type="checkbox"/> No      <input type="checkbox"/> Yes (Submit analysis)                  Was DST run? <input checked="" type="checkbox"/> No      <input type="checkbox"/> Yes (Submit report)                  Directional Survey? <input checked="" type="checkbox"/> No      <input type="checkbox"/> Yes (Submit copy)</p>
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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 Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
12-1/4	8-5/8	24#	0	400		325	78	Ci to surf	
7-7/8	5-1/2	17#	0	4350		1100	396	Ci to surf	

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	4047'								

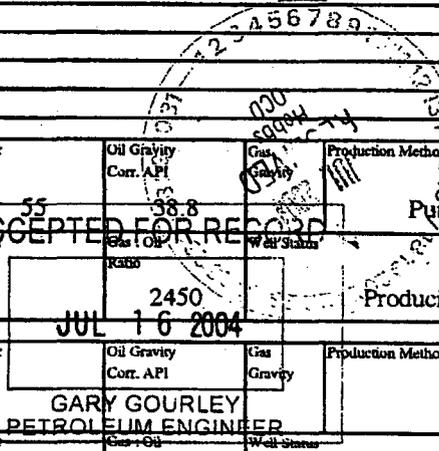
25. Producing Intervals							26. Perforation Record		
Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf Status			
Grayburg	3739		3816-3996	4"	26	Producing			

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.		Amount and Type of Material
Depth Interval		
3982-3996		Acidize w/ 1000 gals 15% NEFE
3904-3919		Acidize w/ 1000 gals 15% NEFE
3816-3822		Acidize w/ 500 gals 15% NEFE
3816-3996		Frac w/ 46,544 gals gel & 94,000# 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
6/3/04	6/29/2004	24	→	80	196	55	58.8		Pumping
Choke Size	Tubing Pressure Fwgs. SI	Casing Pressure	24 Hour Rate	Oil BBL	Gas MCF	Water BBL	Oil Gravity Ratio	Gas Gravity	Production Method
			→				2450		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 Fwgs. SI	Casing Pressure	24 Hour Rate	Oil BBL	Gas MCF	Water BBL	Oil Gravity Ratio	Gas Gravity	Production Method
			→						

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



KZ



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 Resources

Form C-104  
Revised June 1, 2000

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

Submit to Appropriate District Office  
5 Copies

AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

Operator Name and Address <b>APACHE CORPORATION 6120 S YALE, SUITE 1500 TULSA, OK 74136</b>		OGRID Number <b>000873</b>
API Number <b>30-025-36664</b>		Reason for Filing Code / Effective Date <b>NW-6/3/04</b>
Property Code <b>24427</b>	Pool Name <b>Penrose Skelly Grayburg</b>	Pool Code <b>50350</b>
	Property Name <b>Hawk B-1</b>	Well Number <b>41</b>

II. Surface Location

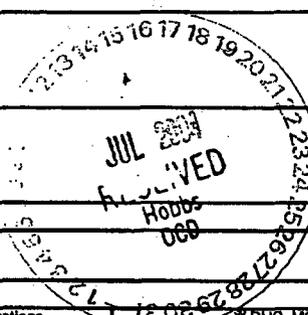
U or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	9	21S	37E		2590	South	2630	West	Lea

Bottom Hole Location

U or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South line	Feet from the	East/West line	County
Use Code <b>F</b>	Producing Method Code <b>P</b>	Gas Connection Date <b>6/3/2004</b>	C-129 Permit Number	C-129 Effective Date	C-129 Expiration Date				

III. Oil and Gas Transporters

Transporter OGRID	Transporter Name and Address	POD	O/G	POD ULSTR Location and Description
037480	EOTT ENERGY PIPELINE LP P O BOX 4666 HOUSTON, TX 77210-4666	0768710	O	K, Sec. 9, T21S, R37E
024650	DYNEGY MIDSTREAM SERVICES 1000 LOUISIANA, SUITE 5800 HOUSTON, TX 77002	0768730	G	K, Sec. 9, T21S, R37E



IV. Produced Water

POD <b>0768750</b>	POD ULSTR Location and Description <b>K, Sec. 9, T21S, R37E</b>
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V. Well Completion Data

Spud Date	Ready Date	TD	PBTD	Perforations	DHC, MC
5/13/2004	6/3/2004	4350'	4350	3816-3996	
Hole Size	Casing & Tubing Size	Depth Set	Sacks Cement		
12-1/4	8-5/8	400	325 sx / circ to surface		
7-7/8	5-1/2	4350	1100 sx / circ to surface		
	2-7/8	4047'			

VI. Well Test Data

Date New Oil <b>6/3/04</b>	Gas Delivery Date <b>6/3/04</b>	Test Date <b>6/29/2004</b>	Test Length <b>24</b>	Tbg. Pressure <b>196</b>	Cig. Pressure <b>80</b>
Choke Size <b>80</b>	Oil <b>80</b>	Water <b>55</b>	Gas <b>196</b>	AOF	Test Method <b>Pumping</b>

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: **7/2/2004** Phone: **(918) 491-4957**

OIL CONSERVATION DIVISION  
Approved by: *[Signature]*  
Title: **PETROLEUM ENGINEER**  
Approval Date: **SEP 01 2004**

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

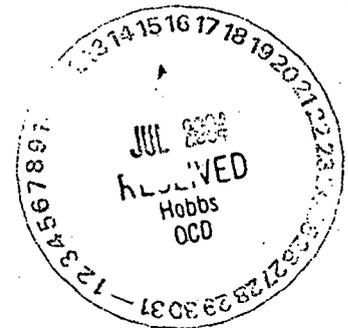
Previous Operator Signature:	Printed Name	Title	Date
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Apache Corporation  
6120 S. Yale Ste 1500  
Tulsa, OK 74136

Hawk B-1 # 41  
Lea County New, Mexico

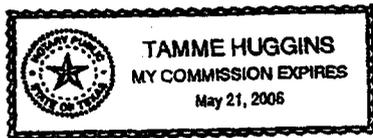
K-9-21s-37e  
2590/s + 2630/w  
30-025-36664

190	1.90	1/4	0.44	0.83	0.83
370	1.80	3/4	1.31	2.36	3.19
886	5.16	1	1.75	9.03	12.22
1356	4.70	1 1/4	2.19	10.28	22.51
1856	5.00	1	1.75	8.75	31.26
2361	5.05	2 1/4	3.94	19.88	51.14
2861	5.00	1 3/4	3.06	15.31	66.45
3358	4.97	3/4	1.31	6.52	72.98
3854	4.96	3/4	1.31	6.51	79.49
4350	4.96	1	1.75	8.68	88.17



*Michael Roghair*  
Michael Roghair - General Manager

The attached instrument was acknowledged before me on the 26<sup>th</sup> day of May, 2004 by Michael Roghair - General Manager, CapStar Drilling, L.P.



*Tamme Huggins*  
Notary Public

*Kz*

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.*

5. Lease Serial No.  
NMNM90161

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
HAWK B-1 #41

9. API Well No.  
30-025-36664

10. Field and Pool, or Exploratory Area  
PENROSE SKELLY; GRAYBURG

11. County or Parish, State  
LEA, NM

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

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
**APACHE CORP.**

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 NE SW 2590 FSL 2630 FWL  
AT PROPOSED PROD. ZONE NE SW 2590 FSL 2630 FWL

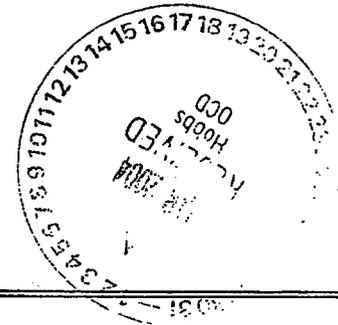
**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

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 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 recomplete 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.)

**EXTEND TOTAL DEPTH FROM 4150' TO 4800'.**

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



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

Name (Printed/Typed)  
**Michelle L. Hanson**

Signature *Michelle L. Hanson*

Title **Engineering Tech., Drilling Dept.**

Date **2/23/2004**

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

Approved by **(OCD) DAVE F. BLASS**

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)



DISTRICT I  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

EXHIBIT D-1

DISTRICT II  
P.O. BOX 100, ARIZONA, N.M. 87011-0100

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

Submit to

State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT III  
1000 Elva Avenue Rd., Aztec, N.M. 87410

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

AMENDED REPORT

API Number <b>30-025-36664</b>	Pool Code <b>50350</b>	Pool Name <b>Penrose Skelly; Grayburg</b>
Property Code <b>24427</b>	Property Name <b>HAWK B-1</b>	Well Number <b>41</b>
OWNER No. <b>873</b>	Operator Name <b>APACHE CORPORATION</b>	ELEVATION <b>3487'</b>

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>K</b>	<b>9</b>	<b>21-S</b>	<b>37-E</b>		<b>2590'</b>	<b>SOUTH</b>	<b>2630'</b>	<b>WEST</b>	<b>LEA</b>

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 <b>40.00</b>	Joint or Infill	Consolidation Code	Order No. <b>NSL-5031(SD)</b>
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**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><i>Michelle Hanson</i> Signature</p> <p><b>Michelle Hanson</b> Printed Name</p> <p><b>Drilling Tech.</b> Title</p> <p><b>9/22/03</b> Date</p>
	<p><b>GEDDETC COORDINATES</b></p> <p>NAD 27 NME Y = 545086.9 N X = 858435.7 E LAT. 37°29'35.36"N LONG. 103°10'03.34"W</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><b>August 06, 2003</b> Date Surveyed</p> <p><b>A.W.B.</b> Signature</p> <p><b>Ronald A. Edson</b> Professional Surveyor</p> <p><b>8/18/03</b> Date</p> <p><b>03-11-2848</b> Certificate No.</p> <p><b>RONALD A. EDSON</b> STATE SURVEYOR</p> <p><b>12848</b> 12848</p>

DISTRICT I  
P.O. BOX 1000, SANTA FE, N.M. 87501-1000

DISTRICT II  
P.O. BOX 900, ALBUQUERQUE, N.M. 87103-0900

DISTRICT III  
1000 RIO BRANCO BL., ALBUQUERQUE, N.M. 87410

DISTRICT IV  
P.O. BOX 1000, SANTA FE, N.M. 87501-1000

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-2

Submit

State Lease - 4 Copies  
Fee Lease - 8 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

APT Number		Pool Code	Pool Name
Property Code	Property Name <b>HAWK B-1</b>		Well Number <b>41</b>
OGED No.	Operator Name <b>APACHE CORPORATION</b>		ELEVATION <b>3487'</b>

Surface Location

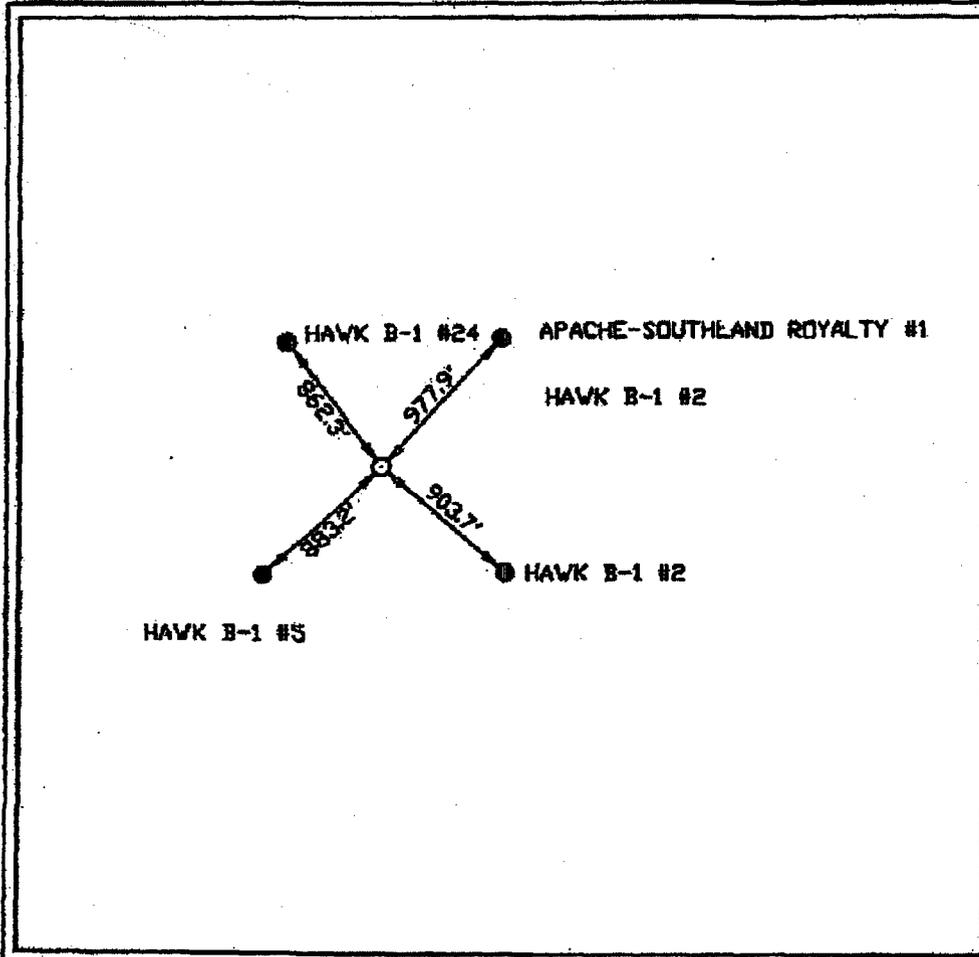
TL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	9	21-S	37-E		2590'	SOUTH	2630'	WEST	LEA

Bottom Hole Location if Different From Surface

TL 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 Intst	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.



**OPERATOR CERTIFICATION**

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

Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

---

**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.

August 06, 2003

Date Surveyed \_\_\_\_\_ A.W.B.

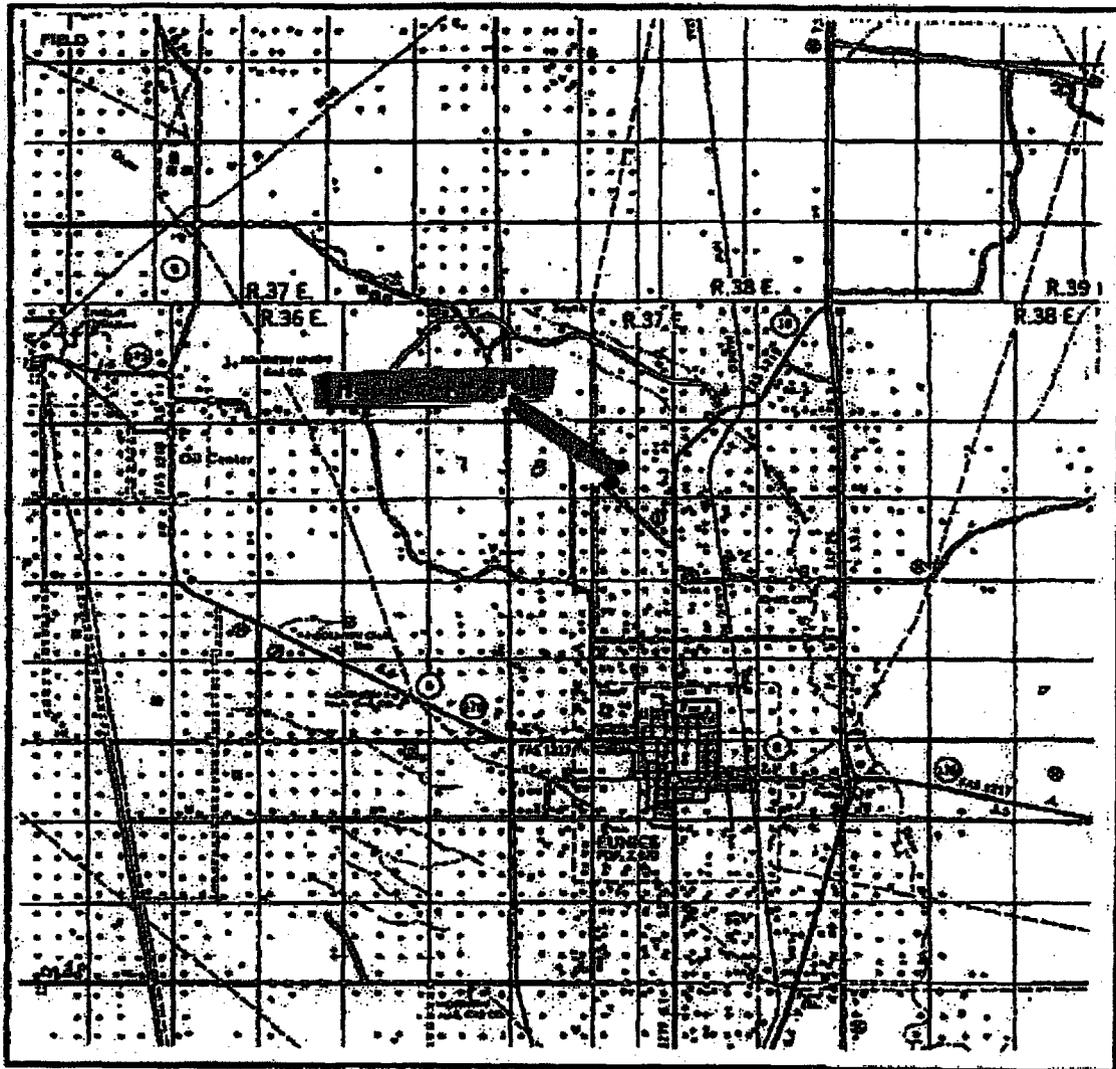
Signature & Seal of Professional Surveyor \_\_\_\_\_

03.11.0848

Certificate No. DONALD J. EDSON 2299  
GARY EDSON 12841

# VICINITY MAP

EXHIBIT E-1



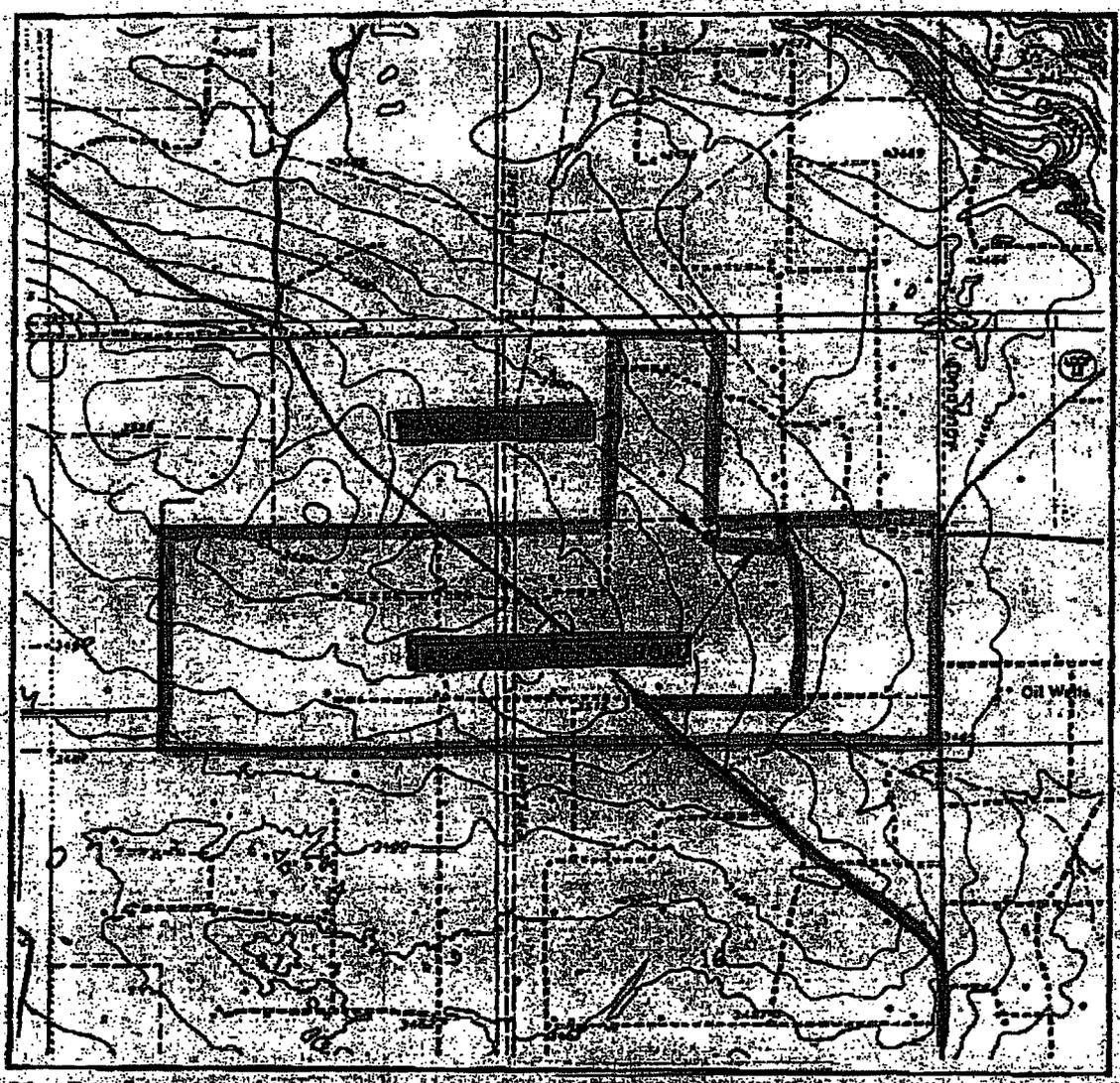
SCALE: 1" = 2 MILES

SEC. 9 TWP. 21-S RGE. 37-E  
 SURVEY N.M.P.M.  
 COUNTY LEA  
 DESCRIPTION 1310' FSL & 1280' FWL  
 ELEVATION 3510'  
 OPERATOR APACHE CORPORATION  
 LEASE HAWK B-1

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

# LOCAL IN VERIFICATION MAP

EXHIBIT E-2



SCALE: 1" = 2000'

SEC. 9 TWP. 21-S. RGE. 37-E

SURVEY: N.M.P.M.

COUNTY: LEA

DESCRIPTION: 2590' FSL & 2530' FWL

ELEVATION: 3487'

OPERATOR: APACHE CORPORATION

LEASE: HAWK-B-1

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

CONTOUR INTERVAL: 10'

EUNICE, N.M.

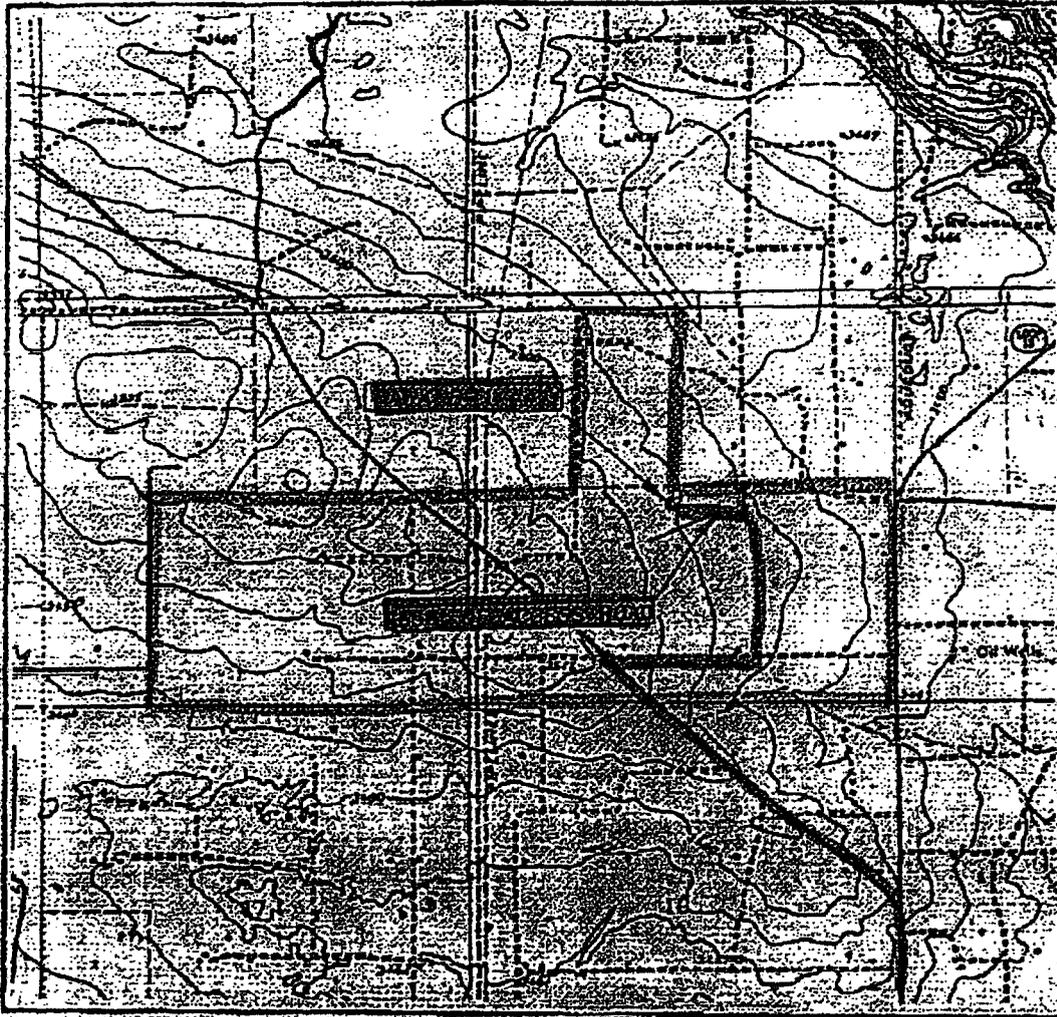
JOHN WEST SURVEYING  
HOBBS, NEW MEXICO  
(505) 393-3117

ACCESS [REDACTED]

LEASE BOUNDARY [REDACTED]

# LOCATION VERIFICATION MAP

EXHIBIT E-3



SCALE: 1" = 2000'

SEC. 8 TWP. 21-S. RGE. 37-E

SURVEY: N.L.P.M.

COUNTY: LINCOLN

DESCRIPTION: 7540 - 51 - 2630 - 11

ELEVATION: 7487

OPERATOR: APACHE CORPORATION

LEASE: HAWK B-1

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

CONTOUR INTERVAL: 10'  
EUNICE, N.M.

1250  
Flow-line

Flow-line Route

JOHN WEST SURVEYING  
BOBBS NEW MEXICO  
(505) 393-3117

ACCESS [REDACTED]

LEASE BOUNDARY [REDACTED]



EXHIBIT "C"

SURFACE USE AND OPERATIONS PLAN  
CULTURAL RESOURCES SURVEY  
APPROXIMATE REHABILITATION SCHEDULE

LOCALITY: HAWK B-1 #41  
OPERATOR: APACHE CORPORATION

LOCATION: NE $\frac{1}{4}$ SW $\frac{1}{4}$  OF SECTION 9, T21S-R37E, N.M.P.M.  
LEA COUNTY, NEW MEXICO

SUBMITTED TO:

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
ROSWELL DISTRICT OFFICE  
2909 WEST 2<sup>ND</sup> STREET  
ROSWELL, NEW MEXICO 88201  
TELEPHONE (505) 627-0272

This plan is submitted to provide permitting agencies with information necessary to allow an appraisal of the environmental effects associated with the proposed drilling operations. Within the context of typical drilling operations, this plan provides for protection of surface resources and other environmental components. This plan has been developed in conformity with the United States Geological Survey NTL-6 guidelines, Bureau of Land Management Oil and Gas Order No. 1, and in connection and consultation with the private surface owner of record, if other than the United States of America, as well as the Roswell District Office for the Bureau of Land Management and the United States Department of the Interior personnel.

PART #1:

- 1) Surface Location:  
NE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 9, Township 21 South, Range 37 East, N.M.P.M.  
Lea County, New Mexico  
2590' FSL, 2630' FWL, Unit K  
See attached Exhibits "D" and "E"
- 2) Bottom Hole Location:  
NE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 9, Township 21 South, Range 37 East, N.M.P.M.  
Lea County, New Mexico  
2590' FSL, 2630' FWL, Unit K  
See attached Exhibits "D" and "E"
- 3) Leases Issued: NM-90161
- 4) Record Lessee:

Apache Corporation	50%
BP America Production Co.	25%
Chevron USA Inc.	25%

- 5) Acres in Lease:  
Township 20 South, Range 37 East, NMPM  
 Section 13: SW $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ SW $\frac{1}{4}$   
Township 20 South, Range 38 East, NMPM  
 Section 30: Lot 1  
Township 21 South, Range 37 East, NMPM  
 Section 4: Lots 3, 6  
 Section 6: NE $\frac{1}{4}$ SE $\frac{1}{4}$ , S $\frac{1}{2}$ SE $\frac{1}{4}$   
 Section 8: SE $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$   
 Section 9: S $\frac{1}{2}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$

Total Acres: 958.25

- 6) Acres Dedicated to Well:  
 There are 40.00 acres dedicated to this well, which takes in the NE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 9, Township 21 South, Range 37 East, N.M.P.M., Lea County, New Mexico.

PART #2:

- 1) Existing Roads:  
 Exhibits "E-1" & "E-2" comprise maps showing the proposed well site in relation to existing roads and State Highway 18. The well is  $\pm 3$  miles northwest of Eunice, New Mexico. From Eunice, go north approximately 2.5 miles on State Highway 18. Turn northwest on existing lease roads to location as illustrated on Exhibit "E-2".
- 2) Planned Access:  
 A. Length and Width: A new 656' access road, 20' wide, will be constructed from the existing lease/access road to the well site. Extra width may be needed in the turns. Application for a buried pipeline will be made if it becomes necessary.  
 B. Construction: The existing roads will be lightly graded and topped with compacted caliche as needed.  
 C. Turnouts: None required.  
 D. Culverts: None required.  
 E. Cuts and Fills: As needed.  
 F. Gates and Cattleguards: None required.
- 3) Location of Existing Wells:  
 Exhibit "F" shows existing wells within a 1-mile radius of the proposed well.
- 4) Location of Existing and/or Proposed Facilities:  
 A. There are production facilities within the area of the Northeast Drinkard Unit, which is adjacent to the wellsite.  
 B. If the oil well proves to be commercial, any necessary production facilities will be installed on the drilling pad, and flow lines will be installed along the proposed and existing roads to the production facilities and storage tanks. See Exhibit "E-3" for flow-line route.
- 5) Location and Type of Water Supply:  
 Apache Corporation plans to drill the proposed well with fresh and brine water which will be transported by truck over proposed and existing access roads.
- 6) Source of Construction Materials:  
 Caliche for surfacing access roads and the wellsite pad will be obtained from the location itself or from BLM pits in the area.
- 7) Method of Handling Waste Material:  
 A. Drill cuttings will be disposed of in the reserve pits.  
 B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.  
 C. All pits will be fenced with normal fencing materials to prevent livestock from entering the area.  
 D. Water produced during operations will be collected in tanks until hauled to an approved disposal system.  
 E. Oil produced during operation will be stored in tanks until sold.  
 F. Apache Corporation will comply with current laws and regulations pertaining to the disposal of human waste.

G. All waste materials will be contained to prevent scattering by the wind and will be removed from the well site within 30 days after drilling and/or completion operations are finished.

8) Ancillary Facilities: None planned.

9) Well Site Layout:

- A. Exhibit "G" shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area have been staked and flagged.
- B. Mat Size: 140' x 200' plus reserve pits as shown on Exhibit "G".
- C. Cut & Fill: Only minor leveling of the drilling site is anticipated.
- D. The surface will be topped with compacted caliche and the reserve pits will be lined with 6 mil plastic.

10) Plans for Restoration of the Surface:

- A. After completion of drilling and/or completion operations, all equipment and other material, not needed for operations, will be removed. Pits will be filled and the location cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. If the proposed well is non-productive, Apache Corporation will comply with all rehabilitation and/or vegetation requirements of the Bureau of Land Management, and such rehabilitation will be accomplished as expeditiously as possible. All pits will be filled and leveled within 90 days after abandonment.

11) Other Information:

- A. Topography: The wellsite and access road are located in the Querecho Plains and are relatively flat.
- B. Soil: The proposed location, access road and production facilities consist of sandy soil. Slope in the proposed area ranges from zero (0) to five (5) degrees.
- C. Flora and Fauna: Vegetation is one of a grassland environment and a scrub-grass, scrub disclimax community. The wildlife consists of rabbits, coyotes, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.
- D. Ponds and Streams: There are no ponds, lakes, streams or feeder creeks in the immediate area.
- E. Residences and Other Structures: There are no occupied residences or other structures on or near the proposed location.
- F. Land Use: The land is used for grazing cattle.
- G. Surface Ownership: The surface is owned by the Trustee of the Millard Deck Estate, c/o Tim Wolters, Bank of America, P. O. Box 270, Midland, TX 79702, 915-685-2864. A Surface Damage Release agreement for this tract has been executed by the Millard Deck Estate and Apache Corporation.
- H. Archaeological, Historical, and Other Cultural Sites:  
Don Clifton, Archaeological Consultant, of Pep, New Mexico, will be conducting an archaeological survey of the proposed HAWK B-1 #41 well which covers the drilling location, production facilities, and access road, including a corridor along said access road for power and flow lines. His report will be filed under separate cover.

I. Senior Representative (Manager, Engineering & Production):

Jim McKinney  
Apache Corporation  
Suite 1500 - Two Warren Place  
6120 South Yale Avenue  
Tulsa, Oklahoma 74136  
(918) 491-4800

Project (Operations Engineer):

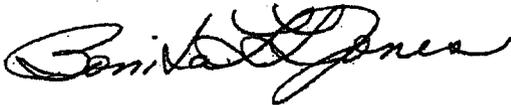
Kevin Mayes  
Apache Corporation  
Suite 1500 - Two Warren Place  
6120 South Yale Avenue  
Tulsa, Oklahoma 74136  
(918) 491-4972

Drilling Operations (Operations Engineer):

Glenn Bone  
Apache Corporation  
Suite 1500 – Two Warren Place  
6120 South Yale Avenue  
Tulsa, Oklahoma 74136  
(918) 491-4907

CERTIFICATION

I hereby certify that Apache Corporation has inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Apache Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.



Bonita L. L. Jones, RLP, Consulting Landman  
Agent for Apache Corporation  
P. O. Box 8309  
Roswell, New Mexico 88202-8309  
(505) 624-9799 FAX (505) 624-9799  
E-Mail: bonita@dfn.com

Date: 11-3-03

**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.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.  
Director

SEAL