

DATE IN 9/11/06	SUSPENSE	ENGINEER M. STOGNER	LOGGED IN 9/11/06	TYPE NSL	APP NO. PTD50625451984
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



31-215-37E
 Dill #6
 capped

ADMINISTRATIVE APPLICATION CHECKLIST

5516

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☒ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☐ Offset Operators, Leaseholders or Surface Owner
 [C] ☐ Application is One Which Requires Published Legal Notice
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

James Bruce
 Print or Type Name

Signature

Attorney for applicant
 Title

Date

jamesbruc@aol.com
 e-mail Address

2006 SEP 11 AM 11 27

JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213
SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone)
(505) 660-6612 (Cell)
(505) 982-2151 (Fax)

jamesbruc@aol.com

September 11, 2006

Hand Delivered

Mark E. Fesmire
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Dear Mr. Fesmire:

Pursuant to Division Rule 104.F(2), Apache Corporation applies for administrative approval of an unorthodox oil well location for the following well:

<u>Well Name:</u>	Gill Well No. 6	30 - 025 - 37 28
<u>Well Location:</u>	1370 feet FSL & 1300 FWL	
<u>Well Unit:</u>	NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 31, Township 21 South, Range 37 East, N.M.P.M., Lea County, New Mexico	

The well will test the Blinebry (Blinebry Oil and Gas Pool), Tubb (Tubb Oil and Gas Pool), and Drinkard (Drinkard Pool) formations, and applicant requests unorthodox location approval in all three zones. The Blinebry, Tubb, and Drinkard zones are expected to be oil productive.

The application is based on geological and engineering reasons. A complete discussion, with exhibits, is attached as Exhibit A. The well is in the approximate center of existing Blinebry, Tubb, and Drinkard wells, and the proposed location will drain additional undrained reserves.

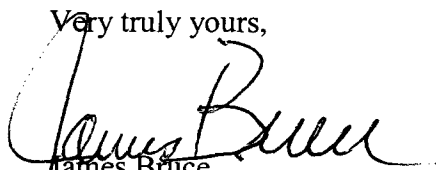
The well unit will be simultaneously dedicated to the proposed well and to the existing Gill Deep Well No. ~~2~~ ⁴

30 - 025 - 37 208

Exhibit B is a land plat. The Gill lease covers, among other acreage, the SW $\frac{1}{4}$ of Section 31. No offset owner is adversely affected by the application, and notice has not been provided to anyone.

Please call me if you need any further information on this matter.

Very truly yours,


James Bruce
Attorney for Apache Corporation

Application of Apache Corporation for administrative
approval of an unorthodox well location:

40 acres – 1370 FSL & 1300' FWL
Section 31, Township 21 South, Range 37 East, NMPM
Lea County, New Mexico

PRIMARY OBJECTIVES: Blinebry, Tubb, and Drinkard

In support:

1. Apache Corporation (Apache) is the operator of the proposed **Gill Deep #6** well (**Exhibit 1**).
2. The proposed unorthodox location encroaches toward following wells, which are, or have been, productive from various combinations of the Blinebry, Tubb, and Drinkard (**Exhibit 2**). **Exhibit 2** displays only those wells with a total depth equal to, or greater than, 5250', sufficient to penetrate at least part of the Blinebry, Tubb, and Drinkard interval. Production from the three reservoirs is assigned to individual Blinebry Oil and Gas, Tubb Oil and Gas, and Drinkard Pools, but downhole commingling is pre-approved pending submission of allocations to the Hobbs District Office.

API	Op.	Well	Loc	Pool	Cum O/G/W	Daily O/G/W
30025	Apache Corp.	Gill Deep #2	31-L	Blinebry (06660)	28/492/143	1/24/
25118	Apache Corp.	Gill Deep #2	31-L	Drinkard (19190)	58/543/5	0/0/0
25208	Apache Corp.	Gill Deep #4	31-K	Blinebry (06660)	21/126/120	2/10/41
25208	Apache Corp.	Gill Deep #4	31-K	Drinkard (19190)	88/990/67	1/15/35
25119	Apache Corp.	Gill Deep #3	31-N	Blinebry (06660)	18/178/177	426/75
25119	Apache Corp.	Gill Deep #3	31-N	Drinkard (19190)	47/545/38	0/0/0
25030	Apache Corp.	Gill Deep #1	31-M	Blinebry (06660)	77/518/82	6/49/60
25030	Apache Corp.	Gill Deep #1	31-M	Tubb (60240)	0.3/1/1	0/0/0
25030	Apache Corp.	Gill Deep #1	31-M	Drinkard (19190)	54/304/227	0/0/0

MBO BOPD
MMCFG MCFGPD
MBW BWPD

2. Apache expects the proposed **Gill Deep #6** to test as an oil well in each of the three reservoirs. Should any reservoir test gas, Apache will either gain the appropriate approvals from the OCD to produce or abandon the reservoir.
3. The proposed **Gill Deep #6** location of 1370' from south line and 1300' from west line is based upon drainage considerations.

a. Geology

Exhibit A

The Blinebry, Tubb, and Drinkard Formations are members of the Yeso Group, Permian Leonardian in age. Fluid contacts, specifically Blinebry GOC at -2255 and Drinkard OWC at -3225, employed by Shell in the unitization hearing for the NorthEast Drinkard Unit, just to the east, were used in the petrophysical evaluation of the reservoirs.

All three formations are shallow marine carbonates, consisting primarily of dolomite. The Tubb has appreciable clastic content and the Drinkard can become limey toward its base. Anhydrite can occur throughout the interval. Pay zones are thin, erratically distributed, and separated by thick impermeable intervals. Porosity and permeability are low. Wells are not generally capable of draining a full 40 Acre spacing unit. In fact, Apache's calculations indicate drainage area usually approximates 20 Acres.

Apache routinely fracture stimulates perforations in each of the three formations then produces them commingled and allocates production based upon well tests. At this stage in the history of all three pools, economics will not permit development of individual reservoirs. Thus, pay from all three reservoirs must be considered for well proposals. A combined Blinebry, Tubb, Drinkard map extracted from a larger area map is, therefore, presented (**Exhibit 3**).

The reservoir was analyzed by mapping hydrocarbon pore volume (SoPhiH) (**Exhibit 3**) of the entire Blinebry, Tubb, and Drinkard interval. SoPhiH is the product of feet of net pay (H) times average porosity (PhiA) times oil saturation (So). The values were obtained as follows:

1. Net Pay was read from modern neutron-density logs which have contractor calculated cross-plotted porosity (XPhi) using a minimum of 5% and a maximum of 20%. Additionally, gamma ray (40 APIU in the Blinebry and Drinkard and 50 APIU in the Tubb) and water saturation (10% - 50%, using a standard equation with $a=1$ and $m=n=2$) cutoffs were also employed.
2. Average Porosity was calculated for intervals meeting those criteria.
3. Oil Saturation is the additive inverse of water saturation.

This analysis requires modern neutron-density and resistivity logs. Although water saturations can be adequately estimated from offsetting modern wells, many wells had to be excluded from analysis because of the vintage or type of porosity logs. SoPhiH isopach lines were modeled after cumulative production isopach lines where new well control is lacking. This procedure has proved successful for Apache in recent drilling in the area.

b. Drainage

The following table provides drainage areas calculated from the SoPhiH map and reserves of the offsetting wells in the four spacing units

impacted. SoPhiH values are either from modern logs, or estimated from the grid. Wells with values determined from modern logs will be in bold and the others are estimated from the grid.

Op.	Well	Loc	Reservoir	SoPhiH FT	Area A	EUR MBO	EUR MMCFG
Apache Corp.	Gill Deep #2	31-L	BTD	4.9	27.2	86	1035
Apache Corp.	Gill Deep #4	31-K	BTD	14.2	11.9	108	1116
Apache Corp.	Gill Deep #3	31-N	BTD	5.3	19.2	65	723
Apache Corp.	Gill Deep #1	31-M	BTD	12.7	16.1	131	823

The proposed **Gill Deep #6** was planned as a "true" 20 Acre infill location between existing Blinebry, Tubb, and Drinkard producers. The location was placed in the center of the vacant area between the existing wells, and then moved due to surface conditions and cultural obstructions.

Reserves for the proposed location were calculated by planimetering the undrained area of the SoPhiH isopach which lies under a drainage circle (the size of which is the average of the direct offset drainage areas) centered on the proposed location. Any competitive drainage is shared between the proposed well and the existing offset wells. The results are as follows:

Op.	Well	Loc	Reservoir	SoPhiH Ft	Area A	EUR MBO	EUR MMCFG
Apache	Gill Deep #6	31-L	BTD	10.0	16	100	800

4. Notice

Apache is the operator of the Blinebry, Tubb, and Drinkard wells toward which the proposed well will encroach, so no other parties need to be notified.

- Approval of this application will afford the interest owners in these spacing units an opportunity to recover oil and gas which would not otherwise be recovered and to do so without violating correlative rights.

DISTRICT I

1625 N. FRENCH DR., BOBBS, NM 88240

State of New Mexico

Energy, Minerals and Natural Resources Department

OK

Form C-102

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name GILL DEEP	Well Number 6
OGRID No.	Operator Name APACHE CORPORATION	Elevation 3469'

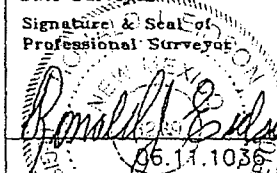
Surface Location

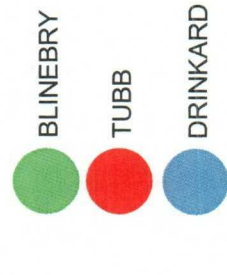
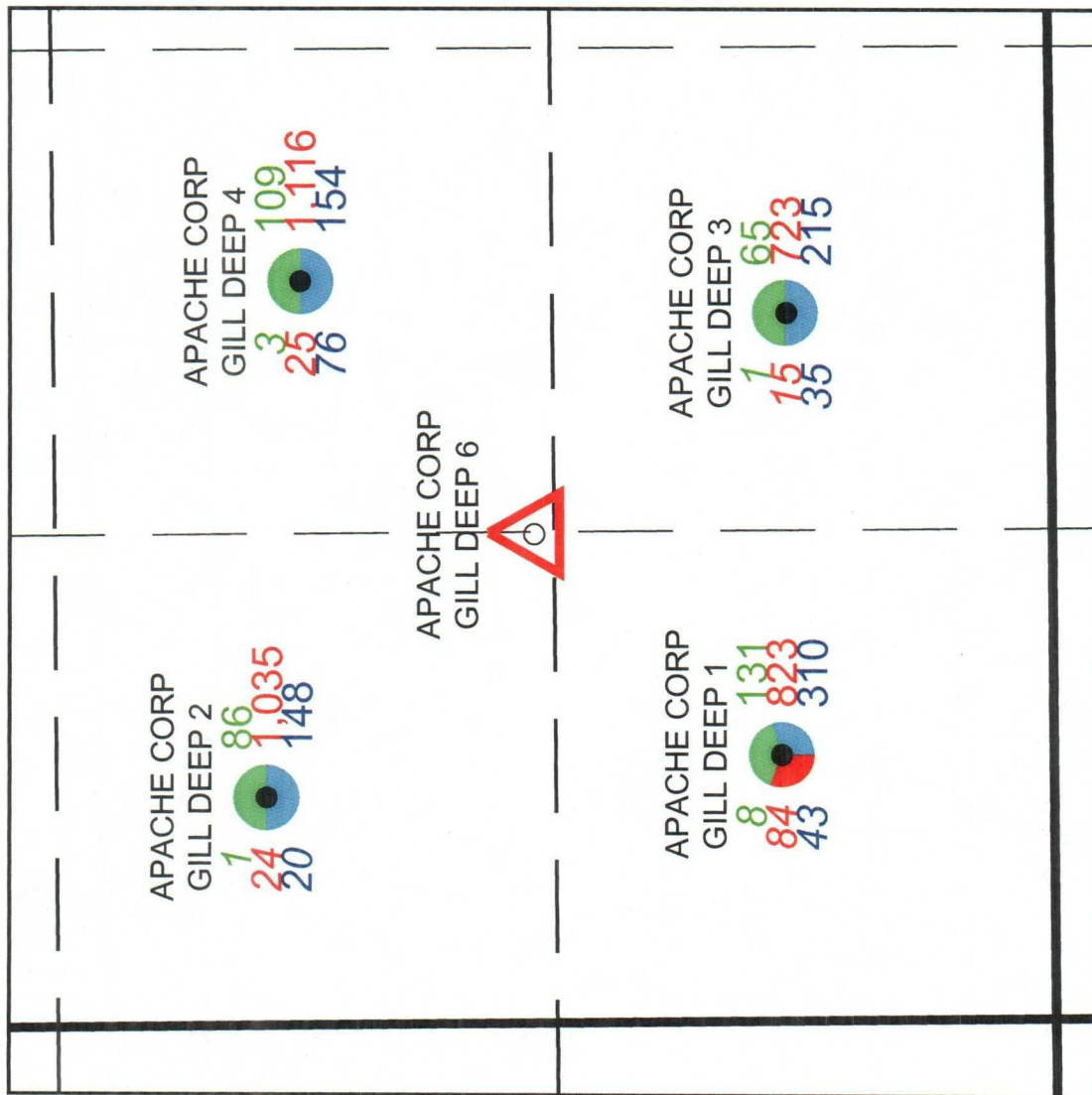
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	31	21-S	37-E		1370	SOUTH	1300	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

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

LOT 1						OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____
37.05 AC LOT 2	GEODETIC COORDINATES NAD 27 NME $Y=522632.5$ N $X=847936.6$ E $LAT.=32.431782^{\circ}$ N $LONG.=103.205653^{\circ}$ W					
37.10 AC LOT 3						
37.16 AC						
1300'					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. JUNE 22, 2006 Date Surveyed _____ JR Signature & Seal of Professional Surveyor  Certificate No. GARY EIDSON 12841 RONALD J. EIDSON 3230	
LOT 4						
37.21 AC						




WELL SYMBOLS

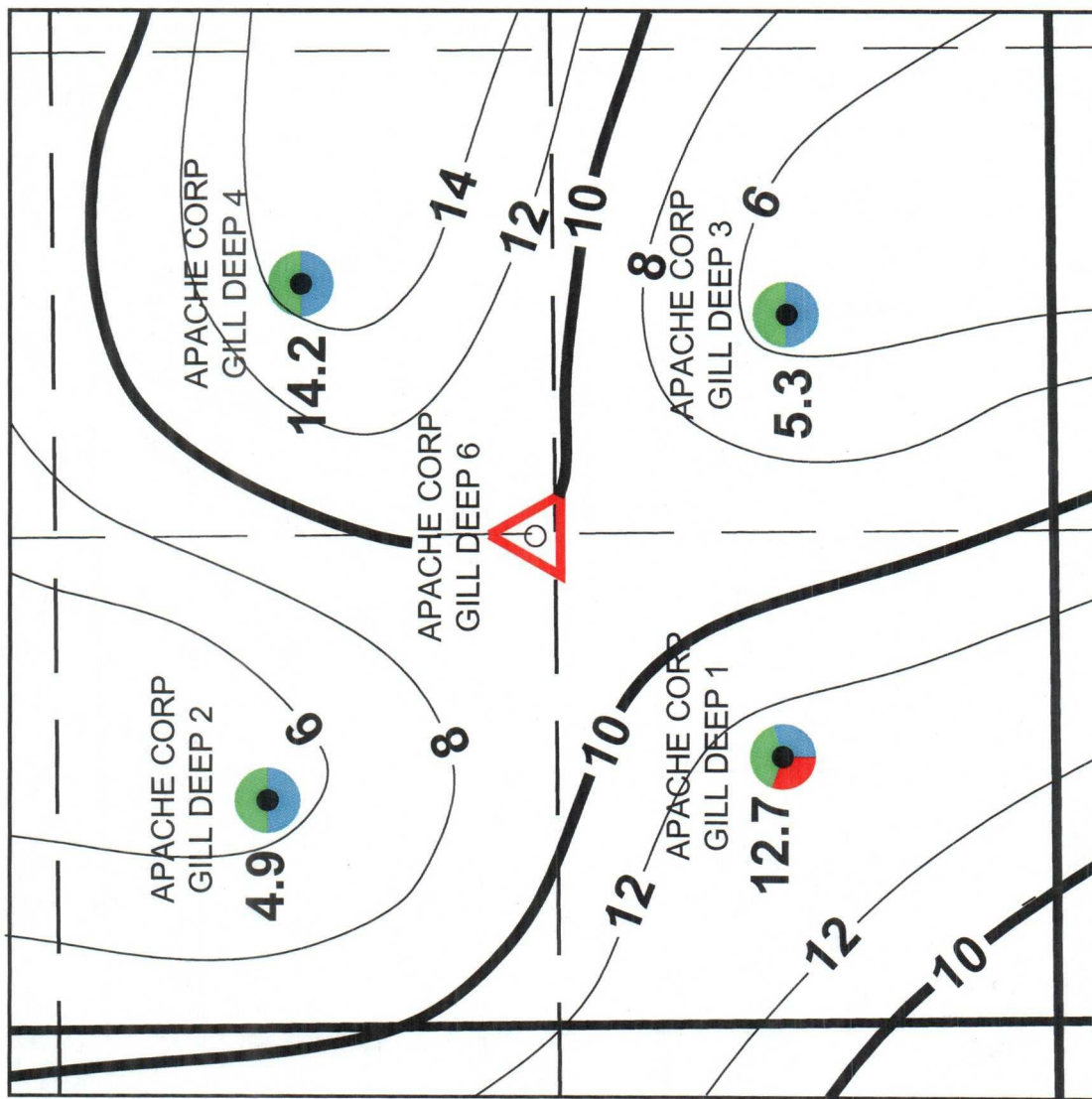
- Location Only
- Oil Well
- ☀ Gas Well
- ⊖ Dry

POSTED WELL DATA

OPERATOR
WELL LABEL

CURRENT BOPD • MBO
CURRENT MCFD • MMCFG
CURRENT BWPD • MBW

 <p>APACHE CORPORATION CENTRAL REGION</p> <p>TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224</p>	<p>GILL DEEP #6</p> <p>SEC 31-T21S-R37E LEA COUNTY, NEW MEXICO</p> <p>EXHIBIT 2 WELL INFORMATION</p>
DATE: 6/29/06	DWG: CURTIS/GILL DEEP (EX2)



WELL SYMBOLS

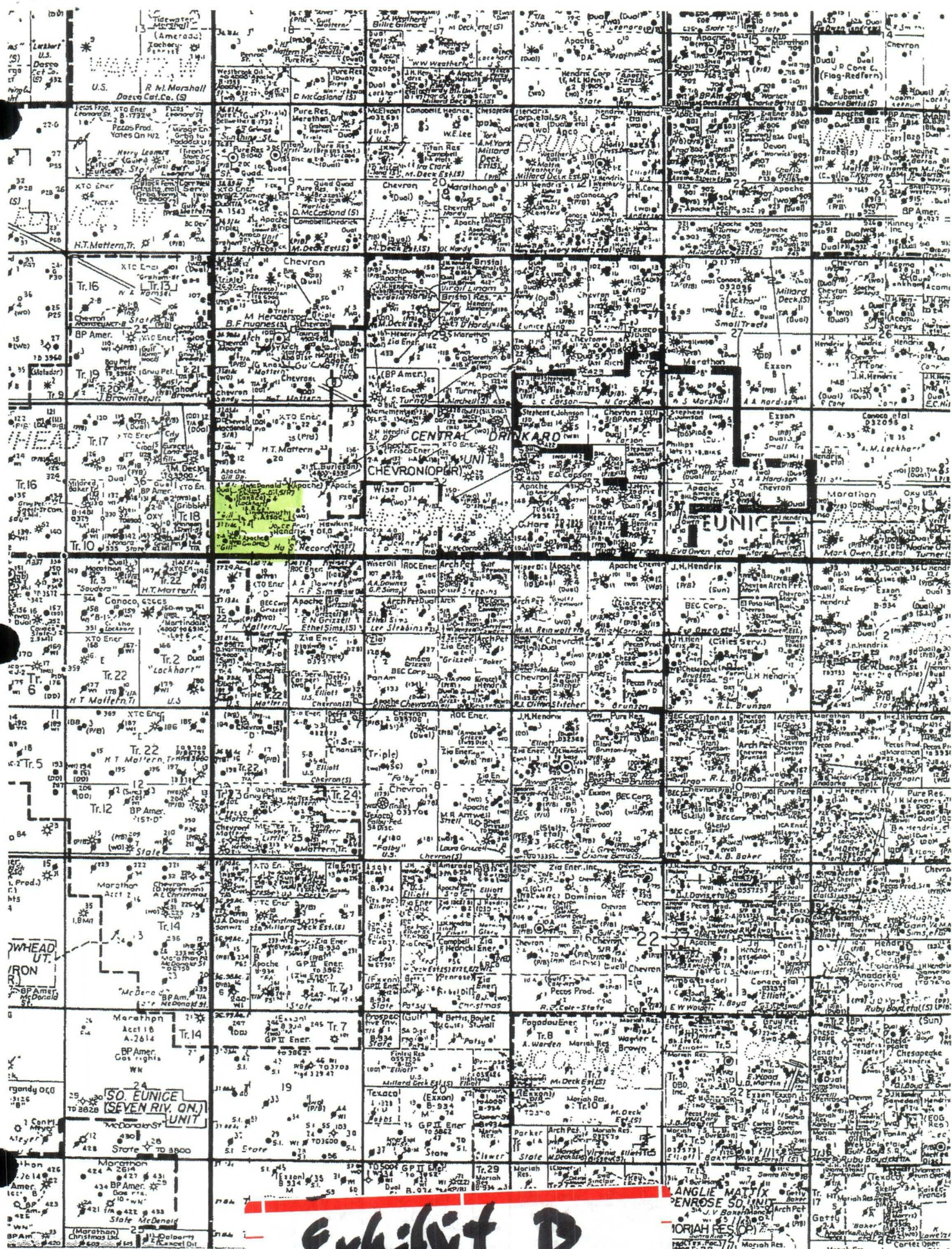
- Location Only
- Oil Well
- ☼ Gas Well
- ⊖ Dry

POSTED WELL DATA

OPERATOR
WELL LABEL

BTD SOPHIH •

 <p>APACHE CORPORATION CENTRAL REGION</p> <p>TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224</p>	<p>GILL DEEP #6</p>
<p>SEC 31-T21S-R37E LEA COUNTY, NEW MEXICO</p>	<p>EXHIBIT 3</p> <p>BTD SOPHIH</p>
<p>DATE: 7/13/06</p>	<p>DWG: CURTIS/GILL DEEP (EX3)</p>



Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Wednesday, November 08, 2006 5:15 PM
To: 'JamesBruc@aol.com'
Subject: Apache Application pTDS06-25451984 Gill #6

Dear Jim

The referenced application does not contain sufficient information for us to determine if notices are required.

The application states, "The Gill lease covers, among other acreage, the SW1/4 of Section 31. No offset owner is adversely affected by the application . . ." The application does not, however, state that Apache is the owner of 100% of the Gill lease as to all of the SW/4 of Section 31, or otherwise state that ownership of the working interest in the SW/4 of Section 31 is common throughout the quarter section.

Please furnish a statement to the effect that, if such is the case, either Apache owns 100% of Gill lease as to all of the SW/4 of Section 31, or ownership of the working interest is uniform throughout the quarter section.

Thanks

David Brooks
Assistant General Counsel
505-476-3450

11/9/2006

JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213
SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone)
(505) 660-6612 (Cell)
(505) 982-2151 (Fax)

jamesbruc@aol.com

2006 NOV 13 PM 1 17

November 13, 2006

Hand Delivered

David K. Brooks
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

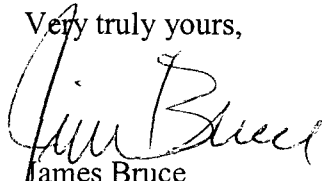
Re: Apache Corporation

<u>Well Name:</u>	Gill Well No. 6
<u>Well Location:</u>	1370 feet FSL & 1300 FWL
<u>Well Unit:</u>	NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 31, Township 21 South, Range 37 East, N.M.P.M., Lea County, New Mexico

Dear David:

In response to your e-mail of November 8th: The Gill lease covers, among other acreage, the SW $\frac{1}{4}$ of Section 31. In the Blinbry, Tubb, and Drinkard formations Apache Corporation is the sole working interest owner, and royalty and overriding royalty ownership is common. Therefore, no offset owner is adversely affected by the application.

Very truly yours,


James Bruce
Attorney for Apache Corporation

JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213
SANTA FE, NEW MEXICO 87501

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jamesbruc@aol.com

2006 NOV 13 PM 1 16

November 13, 2006

Hand Delivered

David K. Brooks
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

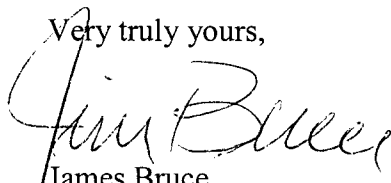
Re: Apache Corporation

<u>Well Name:</u>	H. Corrigan Well No. 20
<u>Well Location:</u>	1480 feet FNL & 330 feet FEL
<u>Well Unit:</u>	SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 4, Township 22 South, Range 37 East, N.M.P.M., Lea County, New Mexico

Dear David:

In response to your e-mail of November 9th: The Corrigan lease covers the NE $\frac{1}{4}$ of Section 4. Working, royalty, and overriding royalty interests in the lease are common. Therefore, no offset owner is adversely affected by the application.

Very truly yours,


James Bruce
Attorney for Apache Corporation

JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213
SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone)
(505) 660-6612 (Cell)
(505) 982-2151 (Fax)

jamesbruce@aol.com

November 13, 2006

Hand Delivered

David K. Brooks
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Apache Corporation

<u>Well Name:</u>	Gill Well No. 6
<u>Well Location:</u>	1370 feet FSL & 1300 FWL
<u>Well Unit:</u>	NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 31, Township 21 South, Range 37 East, N.M.P.M., Lea County, New Mexico

Dear David:

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Very truly yours,



James Bruce

Attorney for Apache Corporation

TRANSACTION REPORT

P. 01

NOV-28-2006 TUE 04:51 PM

FOR:

RECEIVE

DATE	START	SENDER	RX TIME	PAGES	TYPE	NOTE	M#	DP
NOV-28	04:51 PM	9822151	37"	2	RECEIVE	OK		