

ABOVE THIS LINE FOR DIVISION USE ONLY

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



Gulf Hill #8
R-4-215-37E

ADMINISTRATIVE APPLICATION CHECKLIST

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

James Bruce
Signature

Attorney for applicant
Title

jamesbruc@aol.com
e-mail Address

8/15/05
Date

2005 AUG 15 AM 9:23

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)
(5050 982-2151 (Fax)

jamesbruc@aol.com

August 15, 2005

Hand Delivered

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

Dear Mr. Stogner:

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>	Gulf Hill Well No. 8
<u>Well Location:</u>	2630 feet FSL & 2310 feet FEL
<u>Well Unit:</u>	NW $\frac{1}{4}$ SE $\frac{1}{4}$ of irregular Section 4, 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), Drinkard (Drinkard Pool), and Abo (Wantz Abo Pool) formations, and applicant requests unorthodox location approval in all of four zones.

The application is based on geological and engineering reasons in the Blinebry and Drinkard formations. A complete discussion, with exhibits, is attached as Exhibit A. As to the Blinebry and Drinkard, the well is located in the approximate center of Blinebry and/or Drinkard wells in Unit Letters N, O, R and S of Section 4, and the proposed location will drain additional undrained reserves. The Blinebry and Tubb zones are expected to be oil productive.

The Tubb will be tested as applicant drills to total depth, and the Abo is a secondary objective which will be inexpensive to test with the drilling of this well.

Unit I will be simultaneously dedicated, in the Blinebry formation, to the proposed well and the existing Gulf Hill Well No. 1, and applicant requests simultaneous dedication approval.

Exhibit B is a land plat, highlighting the proposed well's location. The location encroaches on Mirage Energy, Inc., the operator of Unit Letter N, and notice has been provided as shown on Exhibit C.

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

Very truly yours,

A handwritten signature in cursive script that reads "James Bruce". The signature is written in black ink and is positioned above the printed name.

James Bruce

Attorney for Apache Corporation

Gulf hill Well No. 8
 2630' FSL & 2310' FEL
 Section 4, Township 21 South, Range 37 East, NMPM
 Lea County, New Mexico

PRIMARY OBJECTIVES: Blinebry, Tubb, and Drinkard

SECONDARY OBJECTIVE: Abo

In support:

1. Apache Corporation (Apache) is the operator of the proposed **Gulf Hill #8** well (**Exhibit 1**).
2. The proposed unorthodox location is offset by the following wells which are, or have been productive from various reservoirs which will be penetrated. (**Exhibit 2**)

OPER	WELL	LOC	RESERVOIR	CUM O/GW	DAILY O/GW	POOL
Mirage Energy	Gulf Hill #2	4-N	BLBY	70/1599/18	1/8/5	Blinebry Oil and Gas
Mirage Energy	Gulf Hill #2	4-N	GRBG	2/4/1	0/0/0	Penrose Skelly Grayburg
Apache	Gulf Hill #3	4-O	BLBY	78/3704/6	1/32/1	Blinebry Oil and Gas
Apache	Gulf Hill #7	4-O	B,T&D	5/16/5	50/141/28	Blinebry Oil & Gas, Tubb Oil & Gas and Drinkard Oil
Apache	Gulf Hill #6	4-O	GRBG	26/74/70	12/44/48	Penrose Skelly Grayburg
Apache	Gulf Hill #1	4-R	BLBY	44/3604/0	0/0/0	Blinebry Oil and Gas
Apache	Gulf Hill #1	4-R	GRBG	8/36/27	1/9/4	Penrose Skelly Grayburg
Mirage Energy	Gulf Hill #5	4-S	BLBY	22/282/47	2/24/8	Blinebry Oil and Gas
Mirage Energy	Gulf Hill #5	4-S	DRKD	4/34/0	0/0/0	Drinkard
Mirage Energy	Gulf Hill #5	4-S	ABO	1/0/0	0/0/0	Wantz; Abo
Summit Energy	Gulf Hill #4	4-S	BLBY	9/394/0	0/0/0	Blinebry Oil and Gas
Summit Energy	Gulf Hill #4	4-S	DRKD	7/566/0	0/0/0	Drinkard
Summit Energy	Gulf Hill #4	4-S	ABO	3/306/0	0/0/0	Wantz; Abo

MBO BOPD
 MMCFG MCFGPD
 MBW BWPD

3. The proposed **Gulf Hill # 8** unorthodox location of 2630' from south line and 2310' from east line is predicated by geological, location, and drainage considerations:



a. Geology

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, have been used here. 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.

All three formations are shallow marine carbonates, consisting primarily of dolomite. The Tubb has appreciable clastic content and the Drinkard becomes 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.

Structure is significant in that it controls the fluid distribution and amount of pay above and below the Blinebry gas-oil contact and above the Drinkard oil-water contact.

Apache approached its evaluation by mapping log derived SoPhiH for each of four major reservoirs: Blinebry Gas Cap, Blinebry Oil Leg, Tubb, and Drinkard. This analysis required modern neutron-density and resistivity logs for any well to be used. Many wells thus had to be excluded from analysis because of the vintage of downhole logs or lack of a full logging suite. Sufficient new well control exists near the proposed location to feel comfortable with this interpretation.

1. Blinebry Gas Cap (Exhibit 3)

Thickness of the Blinebry Gas Cap is partially related to the subsea top of the Blinebry. The higher the top, the thicker the gas cap can be. Using a 5% threshold, porosity averages 9.8% and water saturation averages 29.5% in 138 nearby wells selected for analysis. SoPhiH at this location is expected to be 2.2'.

2. Blinebry Oil Leg (Exhibit 4)

Thickness of the Blinebry Oil Leg is partially related to the subsea top of the Blinebry, the higher the top, the thinner the oil leg might be. Using a 5% threshold, porosity averages 8.5% and water saturation averages 31.6% in 171 nearby wells selected for analysis. SoPhiH at this location is expected to be 4.9'.

3. Tubb (Exhibit 5)

The Tubb is generally considered to be a gas reservoir, although no gas-oil or gas-water contact has been suggested and oil completions are common. Using a 5% porosity threshold and a 50 APIU Gamma Ray threshold because of the greater amount of clastic material, porosity averages 8.0% and water saturation averages 31.1% in 208 nearby wells selected for analysis. SoPhiH at this location is expected to be 4.3'. Only 1 well (Gulf Hill #7, a recent completion) in the four affected spacing units has ever produced the Tubb and it is classified as an oil well.

4. Drinkard (Exhibit 6)

The thickness of the Drinkard pay is also related to its subsea position, the higher the top, the thicker the interval can be. Using a 5% threshold, porosity averages 9.1% and water saturation averages 25.6% in 191 nearby wells selected for analysis. SoPhiH at this location is expected to be 2.8.

5. Abo

The Abo is immediately sub adjacent to the Drinkard. This location is included in Wantz; Abo Pool. It is a secondary objective that will cost less than \$50,000 to drill and complete in this wellbore but it cannot be drilled as a primary target. Three wells have penetrated the Abo and two (Gulf Hill #4 and #5) have produced in the past, but are not currently producing.

6. Uphole Reservoirs

If potentially commercial reservoirs are encountered in the Grayburg and San Andres, a separate wellbore will be proposed to exploit those reservoirs.

b. Location

Apache's intent was to place the well equidistant from the productive Blinebry, Tubb, and Drinkard wells on the Gulf Hill Lease to encounter an undrained reservoir volume.

c. Drainage

The proposed **Gulf Hill #8** is approximately equidistant from the productive Blinebry, Tubb, and Drinkard wells in Units O and R and should encounter an undrained reservoir volume.

Reservoir engineering used the SoPhiH maps to estimate drainage of each offsetting well in each reservoir. Recoverable reserves for this location are calculated as the volume under a 20 A radius (less if the direct offsets were not capable of draining 20 A) with reduced reservoir

pressure where drainage has occurred. Drainage offsetting this location is as follows:

SEC	LEASE NAME	WELL	PROD ZONE NAME	EUR			DRAINED ACRES
				OIL	WATER	GAS	
4	Gulf Hill	2	BLINEBRY GAS CAP	12870	8931	1287	93
4	Gulf Hill	3	BLINEBRY GAS CAP	33740	2880	3374	195
4	Gulf Hill	7	BLINEBRY GAS CAP	16713	0	154	10
4	Gulf Hill	1	BLINEBRY GAS CAP	34610	154	3461	160
4	Gulf Hill	4	BLINEBRY GAS CAP	2940	42	294	20
4	Gulf Hill	5	BLINEBRY GAS CAP	1030	23364	103	7
4	Gulf Hill	2	BLINEBRY OIL LEG	57394	8931	312	18
4	Gulf Hill	3	BLINEBRY OIL LEG	44232	2880	330	13
4	Gulf Hill	7	BLINEBRY OIL LEG	16713	0	154	5
4	Gulf Hill	1	BLINEBRY OIL LEG	9885	0	143	3
4	Gulf Hill	4	BLINEBRY OIL LEG	6133	0	100	3
4	Gulf Hill	5	BLINEBRY OIL LEG	21086	23364	179	6
4	Gulf Hill	2	TUBB				
4	Gulf Hill	3	TUBB				
4	Gulf Hill	7	TUBB	33426	0	307	20
4	Gulf Hill	1	TUBB				
4	Gulf Hill	4	TUBB				
4	Gulf Hill	5	TUBB				
4	Gulf Hill	2	DRINKARD				
4	Gulf Hill	3	DRINKARD				
4	Gulf Hill	7	DRINKARD	33426	0	307	15
4	Gulf Hill	1	DRINKARD				
4	Gulf Hill	4	DRINKARD	7482	0	566	6
4	Gulf Hill	5	DRINKARD	3694	200	34	2

Volumetrics for the proposed location are as follows:

		PROD ZONE NAME	RESERVOIR	DRAINAGE	EUR	
			PRESSURE	ACRES	OIL (BO)	GAS (BCFG)
Gulf Hill	8	BLINEBRY GAS CAP	500	0	0	0
		BLINEBRY OIL LEG	2500	9	32137	209
		TUBB	2500	20	6960	696
		DRINKARD	2500	4	8332	125
		TOTAL			47429	1030

4. Notice

Apache is the operator and only working interest owner in the Blinebry, Tubb, Drinkard, and Abo wells in Drilling and Spacing Units O and R (further described as Lot 15, & NWSE Section 4). Mirage Energy, Inc. operates wells to the northwest, and has been notified at:

Mirage Energy, Inc
P.O. Box 760
Eunice, NM 88231

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

State of New Mexico

DISTRICT I
1825 N. FRANCIS DR., HOHDS, NM 88240

Energy, Minerals and Natural Resources Department

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 JUNE 10, 2003
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 GULF HILL	Well Number 8
OGRD No.	Operator Name APACHE CORPORATION	Elevation 3472'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
R	4	21-S	37-E		2630	SOUTH	2310	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								
<table border="1"> <tr> <td>Dedicated Acres</td> <td>Joint or Infill</td> <td>Consolidation Code</td> <td>Order No.</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>										Dedicated Acres	Joint or Infill	Consolidation Code	Order No.				
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

GEODETIC COORDINATES
NAD 27 NME

Y=550417.4 N
X=859721.1 E

LAT.=32°30'28.06" N
LONG.=103°09'59.33" W

2000 0 2000 4000 Feet
Scale: 1"=2000'

OPERATOR CERTIFICATION

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

Signature _____

Printed Name _____

Title _____

Date _____

SURVEYOR CERTIFICATION

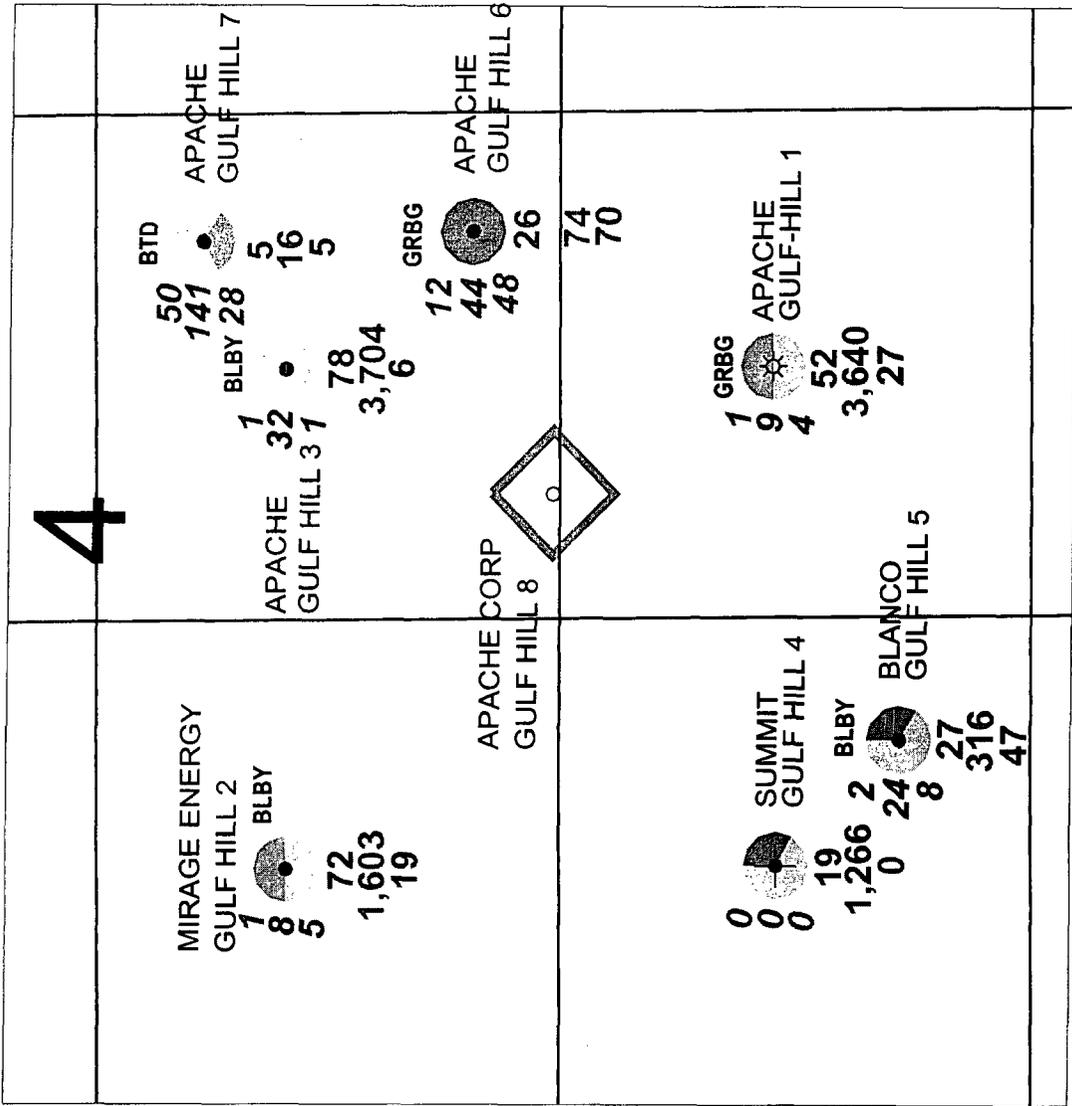
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JUNE 10, 2005

Date Surveyed _____ JR

Signature & Seal of Professional Surveyor _____

Certificate No. GARY EDSON 12841



WELL SYMBOLS

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

POSTED WELL DATA

PRODUCING FORMATION
CURRENT BOPD ● OPERATOR
CURRENT MCFD ● WELL LABEL
CURRENT BWPD MBO
 MMCFG
 MBW

Apache
CORPORATION
CENTRAL REGION

TWO WARREN PLACE, SUITE 1500
6120 SOUTH YALE
TULSA, OKLAHOMA 74136-4224

GULF HILL #8

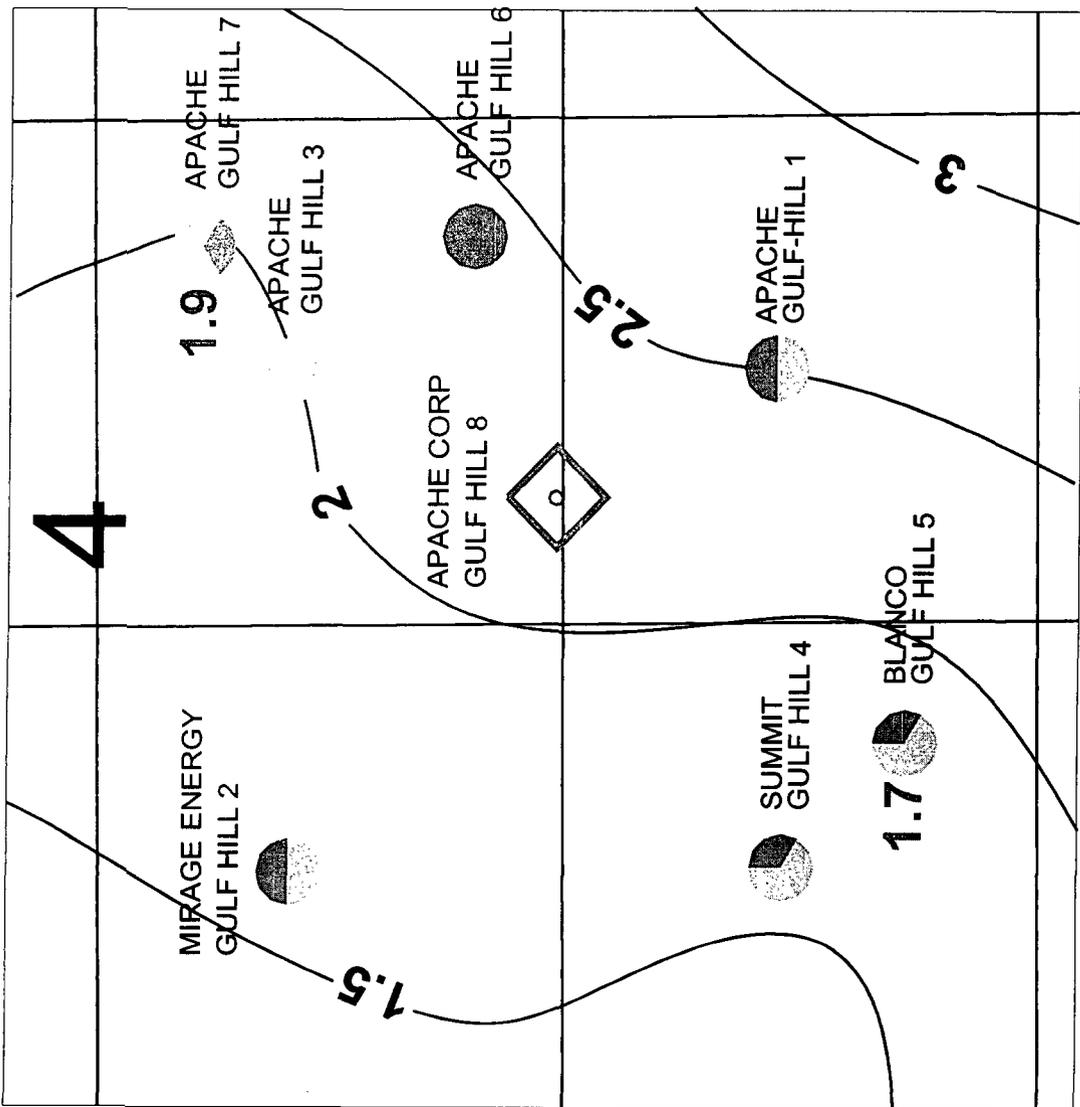
SEC 4-T21S-R37E
LEA COUNTY, NEW MEXICO

EXHIBIT 2
WELL INFORMATION

DATE: 7/12/05 DWG: CURTIS\OCD-NM2005\GULF HILL 8\EX 2

- YATES-SEVEN RIVERS-QUEEN
- GRAYBURG
- SAN ANDRES
- PADDOCK
- BLINEBRY
- TUBB
- DRINKARD
- ABO
- FUSSELMAN





GAMMA RAY LTE 40 APIU
 XPHI GTE 5%
 SW LTE 50%

- WELL SYMBOLS**
- Location Only
 - Oil Well
 - ☀ Gas Well
 - ⊖ Dry

POSTED WELL DATA

BLBY GAS CAP SOPHIH ● OPERATOR WELL LABEL

 APACHE CORPORATION CENTRAL REGION	TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224
	GULF HILL #8
SEC 4-T21S-R37E LEA COUNTY, NEW MEXICO	
EXHIBIT 3	
BLBY GAS CAP SOPHIH	
DATE: 7/5/05	DWG: CURTIS\OCD-NM\2005\GULF HILL_8\EX3

- YATES-SEVEN RIVERS-QUEEN
- GRAYBURG
- SAN ANDRES
- PADDOCK
- BLINEBRY
- TUBB
- DRINKARD
- ABO
- FUSSELMAN



GAMMA RAY LTE 40 APIU
 XPHI GTE 5%
 SW LTE 50%

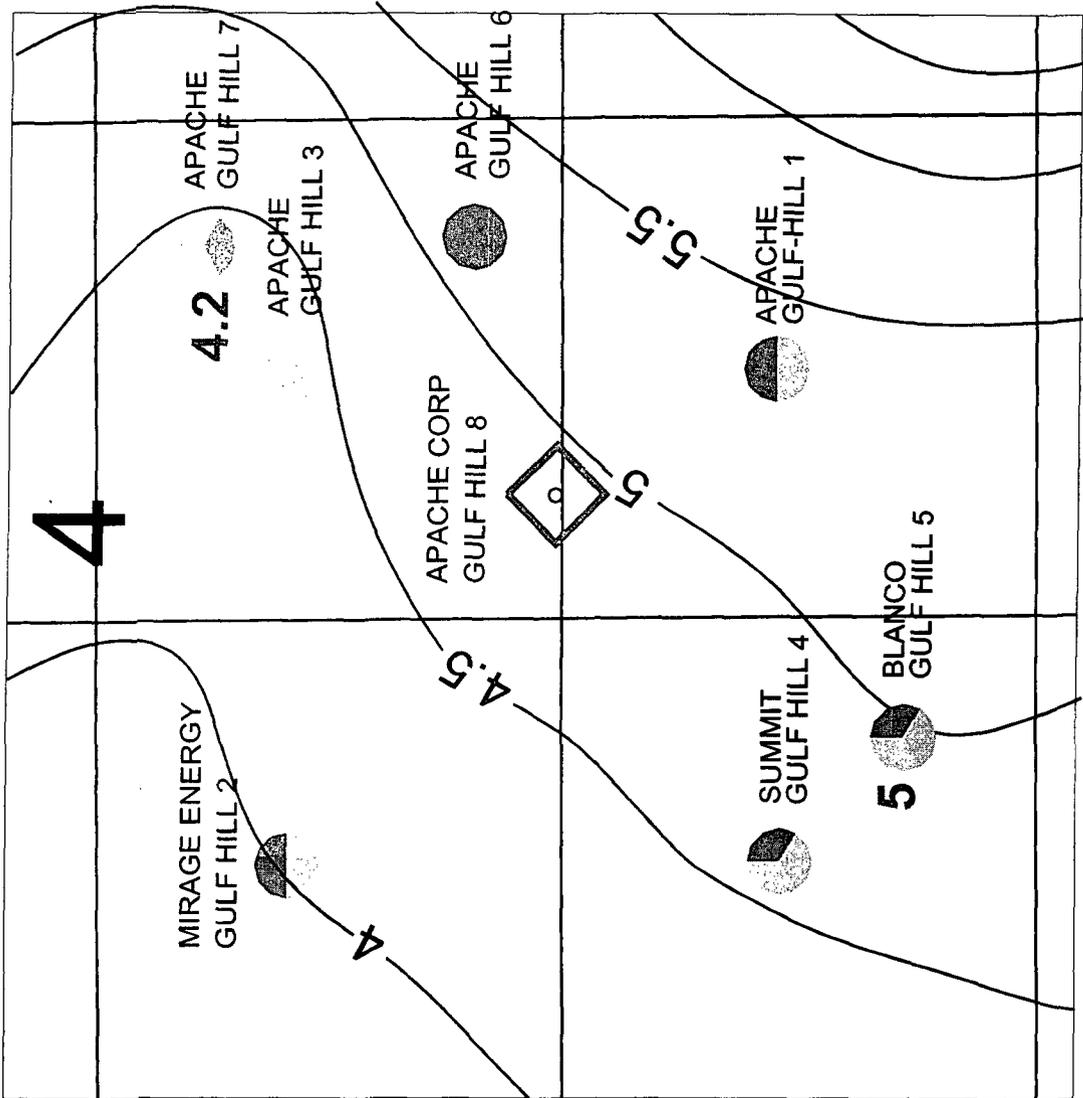
WELL SYMBOLS

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

POSTED WELL DATA

BLBY OIL LEG SOPHIH ● OPERATOR WELL LABEL

 APACHE CORPORATION CENTRAL REGION	TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224
	GULF HILL #8
SEC 4-T21S-R37E LEA COUNTY, NEW MEXICO	
EXHIBIT 4	
BLBY OIL LEG SOPHIH	
DATE: 7/5/05	DWG: CURTIS/OCD-NM2005/GULF HILL 8/EX 4



- YATES-SEVEN RIVERS-QUEEN
- GRAYBURG
- SAN ANDRES
- PADDOCK
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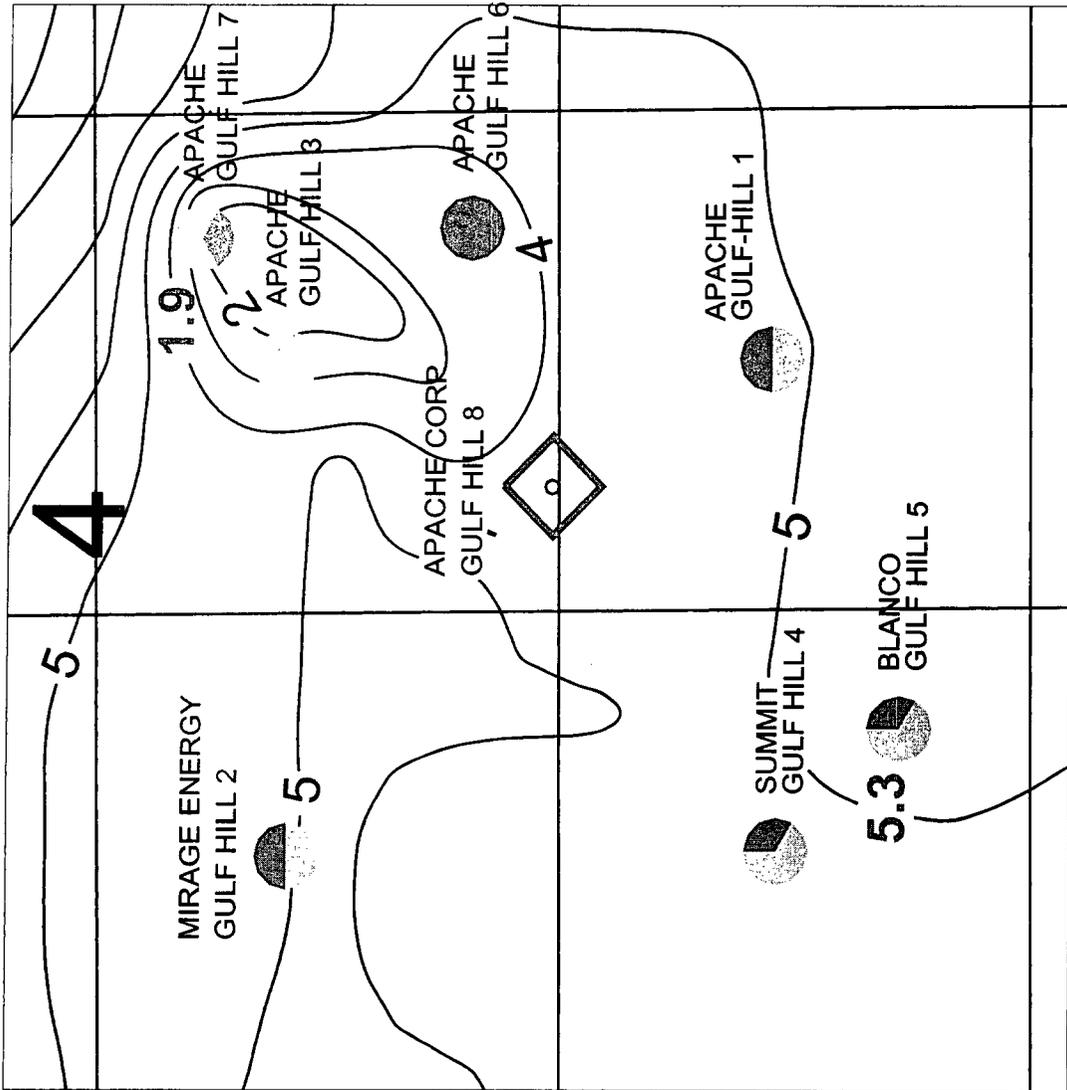
GAMMA RAY LTE 50 APIU
 XPHI GTE 5%
 SW LTE 50%

WELL SYMBOLS

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

POSTED WELL DATA

TUBB ● OPERATOR
SOPHIH ● WELL LABEL



- YATES-SEVEN RIVERS-QUEEN
- GRAYBURG
- SAN ANDRES
- PADDOCK
- BLINEBRY
- TUBB
- DRINKARD
- ABO
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 APACHE CORPORATION CENTRAL REGION	TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224
	GULF HILL #8
SEC 4-T21S-R37E LEA COUNTY, NEW MEXICO	
EXHIBIT 5	
TUBB SOPHIH	
DATE: 7/5/05	DWG: CURTIS\OCD-NM\2005\GULF HILL 8\EX 5

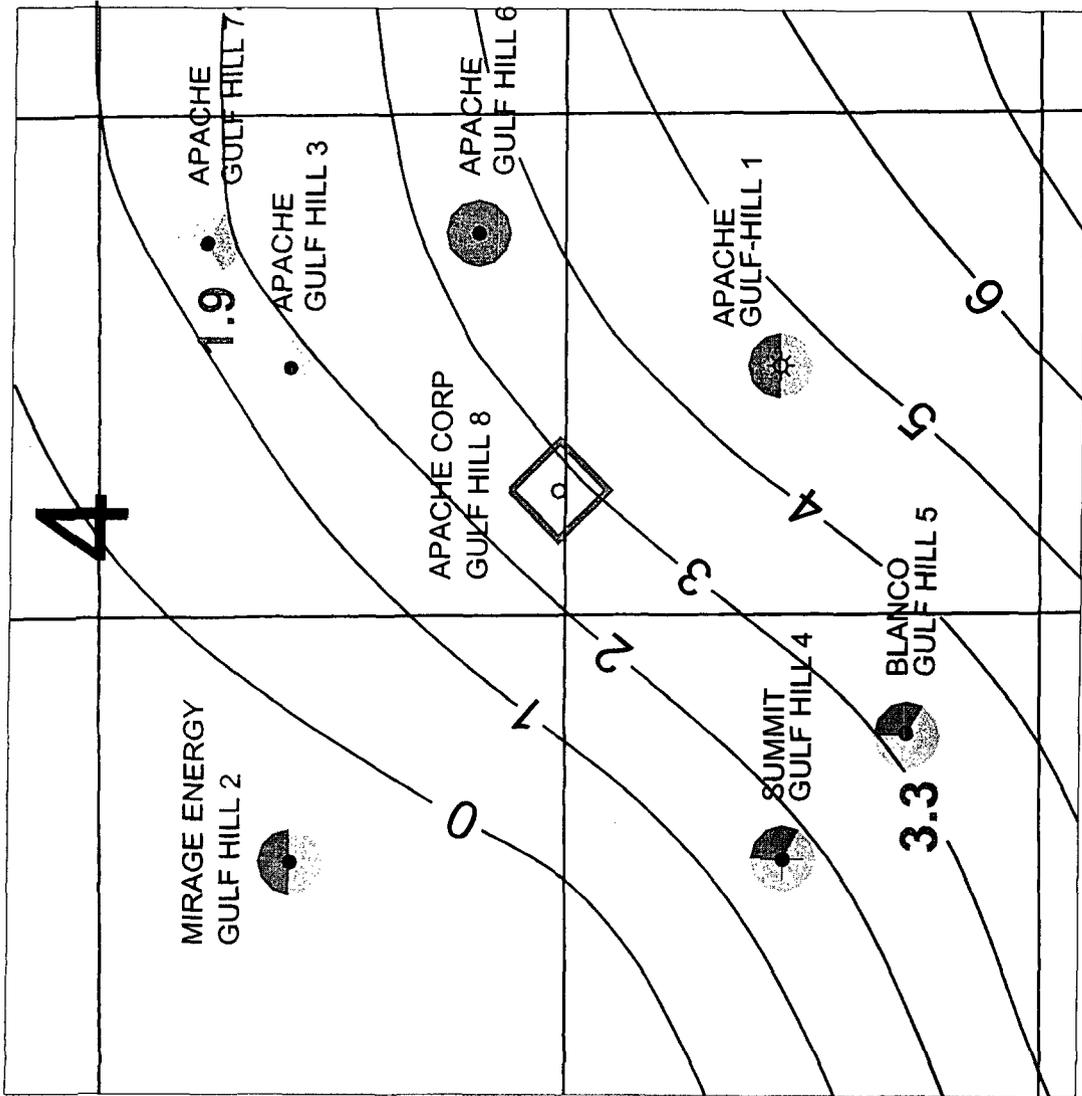
GAMMA RAY LTE 40 APIU
 XPHI GTE 5%
 SW LTE 50%

WELL SYMBOLS

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

POSTED WELL DATA

DRKD ● OPERATOR
SOPHIH ● WELL LABEL



- YATES-SEVEN RIVERS-QUEEN
- GRAYBURG
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- PADDOCK
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Apache
 CORPORATION
 CENTRAL REGION

TWO WARREN PLACE, SUITE 1500
 6120 SOUTH YALE
 TULSA, OKLAHOMA 74136-4224

GULF HILL #8

SEC 4-T21S-R37E
 LEA COUNTY, NEW MEXICO

EXHIBIT 6

DRKD SOPHIH

DATE: 7/5/05 DWG: CURTIS\OCD-NM\2005\GULF HILL 8\EX65

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)
(5050 982-2151 (Fax)

jamesbruc@aol.com

August 15, 2005

Mirage Energy, Inc.
P.O. Box 760
Eunice, New Mexico 88231

Ladies and gentlemen:

Apache Corporation has filed an application with the New Mexico Oil Conservation Division seeking an unorthodox oil well location in the Blinbry/Tubb/Drinkard/Abo formations in the NW¼SE¼ of Section 4, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico. A copy of the application is enclosed. If you object to the application, you must notify the Division in writing no later than Monday, September 5, 2005 (the Division's address is 1220 South St. Francis Drive, Santa Fe, New Mexico 87505). Failure to object will preclude you from contesting this matter at a latter date.

Very truly yours,


James Bruce

Attorney for Apache Corporation



JAMES BRUCE
ATTORNEY AT LAW

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jamesbruc@aol.com

August 15, 2005

Mirage Energy, Inc.
P.O. Box 760
Eunice, New Mexico 88231

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Very truly yours,


James Bruce

Attorney for Apache Corporation



 Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

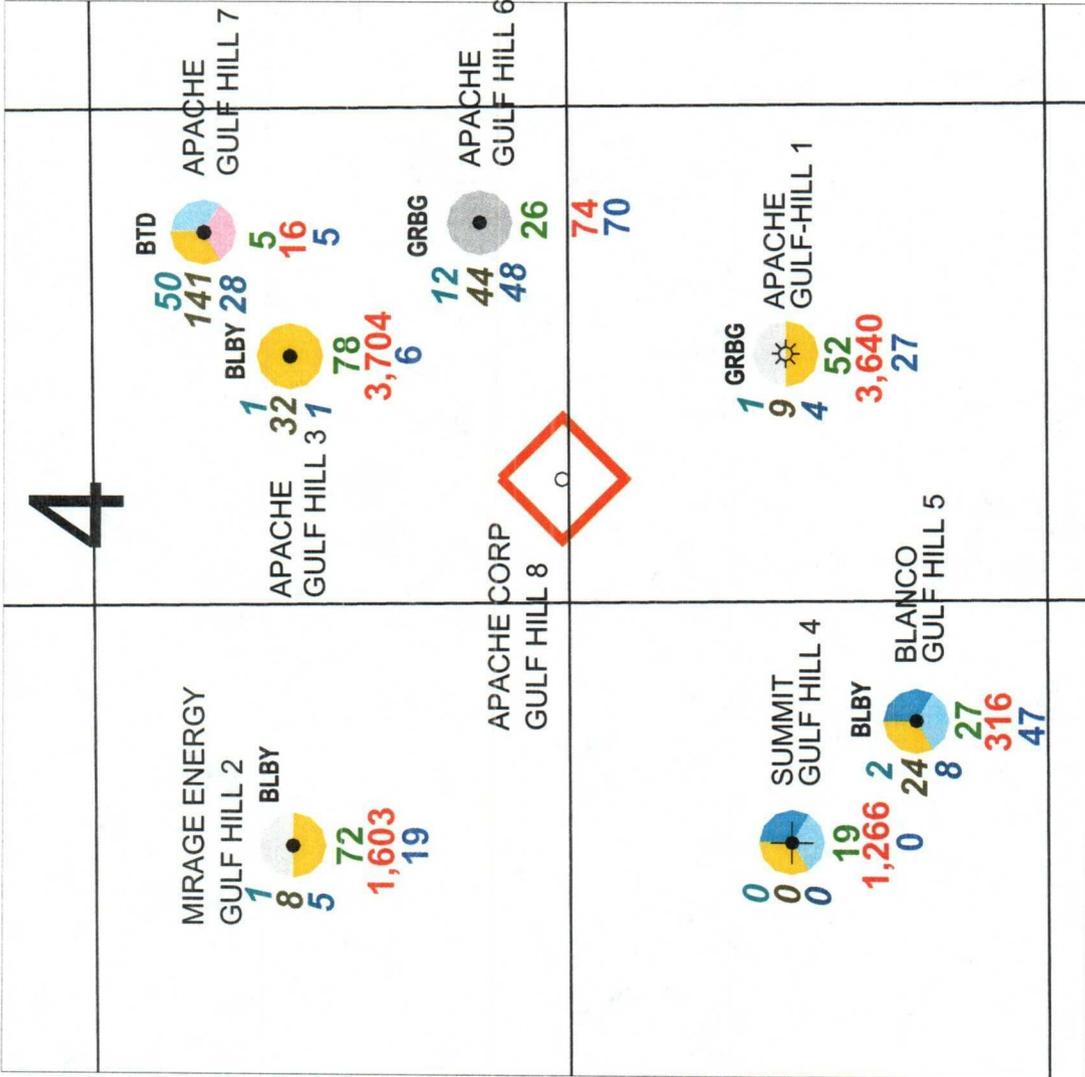
Stogner, Michael, EMNRD

From: JamesBruc@aol.com [JamesBruc@aol.com] **Sent:** Mon 8/15/2005 7:59 AM
To: Stogner, Michael, EMNRD
Cc:
Subject: Apache unorthodox locations
Attachments:  HAWKB-146.ppt(889KB)  GULFHILL8.ppt(882KB)  HAWKB-147.ppt(965KB)  HAWKB-148.ppt(805KB)

Mike: I am filing four applications today. Attached are color copies of the geological exhibits.

Jim

4



WELL SYMBOLS

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

POSTED WELL DATA

- PRODUCING FORMATION
- CURRENT BOPD**
 - CURRENT MCFD**
 - CURRENT BWPD**
- OPERATOR WELL LABEL
- MBO**
 - MMCFG**
 - MBW**



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TWO WARREN PLACE, SUITE 1500
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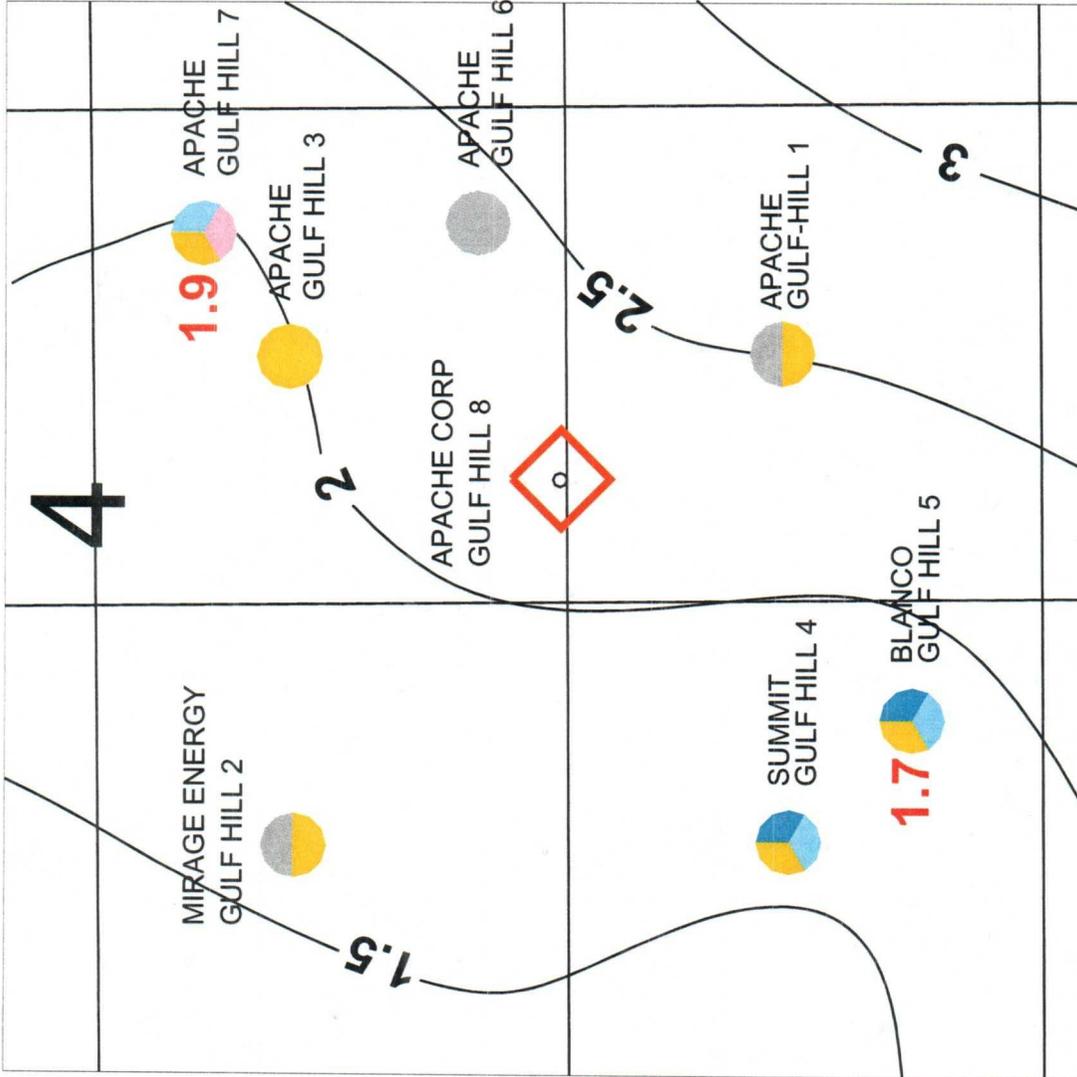
GULF HILL # 8

SEC 4-T21S-R37E
LEA COUNTY, NEW MEXICO

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WELL INFORMATION

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- GRAYBURG
- SAN ANDRES
- PADDOCK
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- DRINKARD
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GAMMA RAY LTE 40 APIU
 XPHI GTE 5%
 SW LTE 50%

WELL SYMBOLS

- Location Only
- Oil Well
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- ☹ Dry

POSTED WELL DATA

BLBY GAS CAP SOPHIH ● OPERATOR WELL LABEL

	TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224
	GULF HILL # 8
SEC 4-T21S-R37E LEA COUNTY, NEW MEXICO	
EXHIBIT 3	
BLBY GAS CAP SOPHIH	
DATE: 7/5/05	DWG: CURTIS/OCD-NM2005/GULF HILL 8/EX3

- YATES-SEVEN RIVERS-QUEEN
- GRAYBURG
- SAN ANDRES
- PADDOCK
- BLINEBRY
- TUBB
- DRINKARD
- ABO
- FUSSELMAN



GAMMA RAY LTE 40 APIU
 XPHI GTE 5%
 SW LTE 50%

WELL SYMBOLS

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

POSTED WELL DATA

BLBY OIL LEG
SOPHIIH ● OPERATOR
 WELL LABEL

 TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224	GULF HILL # 8
	SEC 4-T21 S-R37E LEA COUNTY, NEW MEXICO
EXHIBIT 4	
BLBY OIL LEG SOPHIIH	
DATE: 7/5/05	DWG: CURTIS(OCD-NM)2005(GULF HILL 8)EX 4

- YATES-SEVEN RIVERS-QUEEN
- GRAYBURG
- SAN ANDRES
- PADDOCK
- BLINEBRY
- TUBB
- DRINKARD
- ABO
- FUSSELMAN



GAMMA RAY LTE 50 APIU
 XPHI GTE 5%
 SW LTE 50%

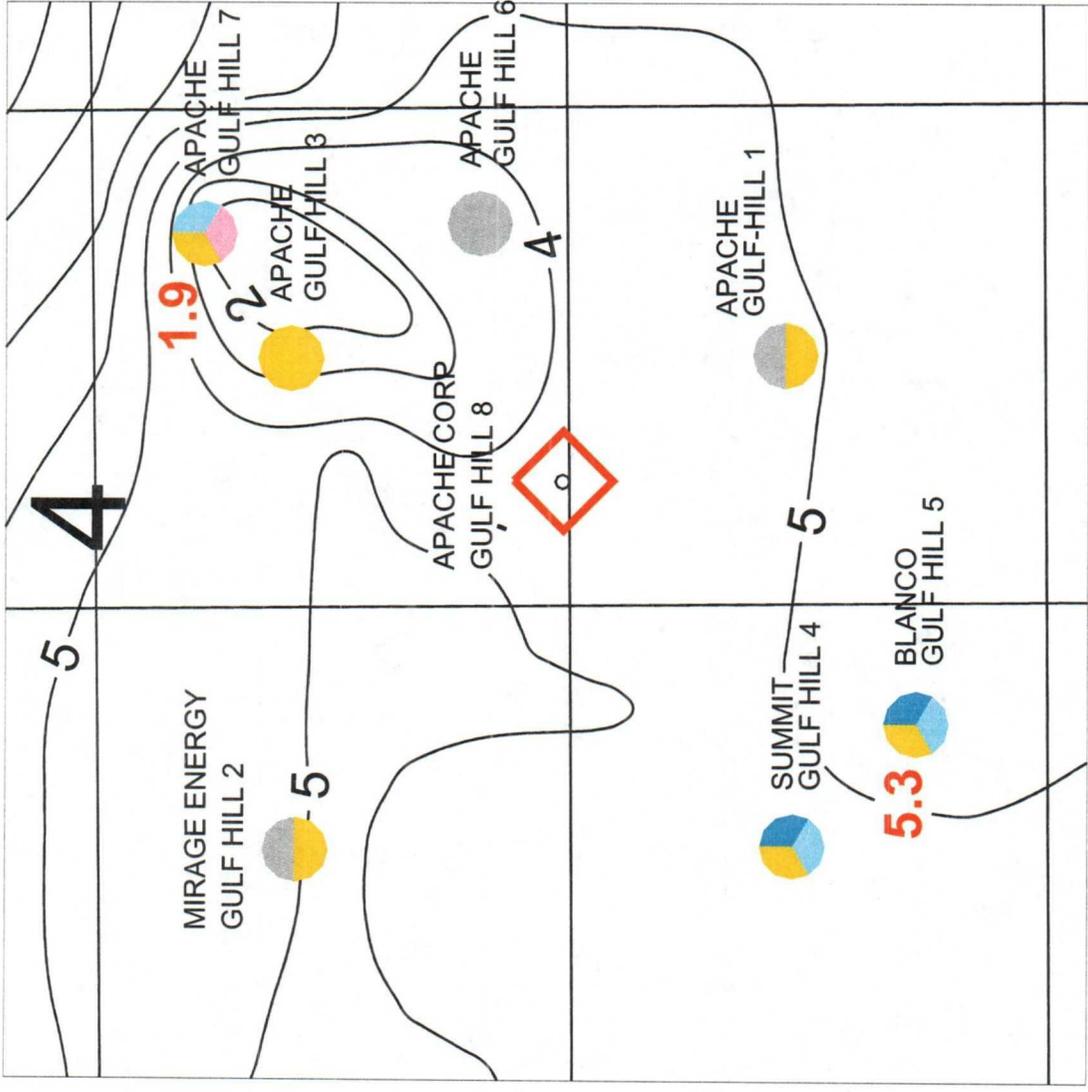
WELL SYMBOLS

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

POSTED WELL DATA

TUBB ● OPERATOR WELL LABEL
SOPHIH ●

	TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224
	GULF HILL # 8
SEC 4-T21S-R37E LEA COUNTY, NEW MEXICO	
EXHIBIT 5	
TUBB SOPHIH	
DATE: 7/5/05	DWG: CURTIS/OCD-NM/2005/GULF HILL 8/EX 5



- | | |
|----------------------------|-------------|
| ● YATES-SEVEN RIVERS-QUEEN | ● TUBB |
| ● GRAYBURG | ● DRINKARD |
| ● SAN ANDRES | ● ABO |
| ● PADDOCK | ● FUSSELMAN |
| ● BLINEBRY | |



GAMMA RAY LTE 40 APIU
 XPHI GTE 5%
 SW LTE 50%

WELL SYMBOLS

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

POSTED WELL DATA

DRKD SOPHIH ● OPERATOR WELL LABEL



TWO WARREN PLACE, SUITE 1500
 6120 SOUTH YALE
 TULSA, OKLAHOMA 74136-4224

GULF HILL # 8

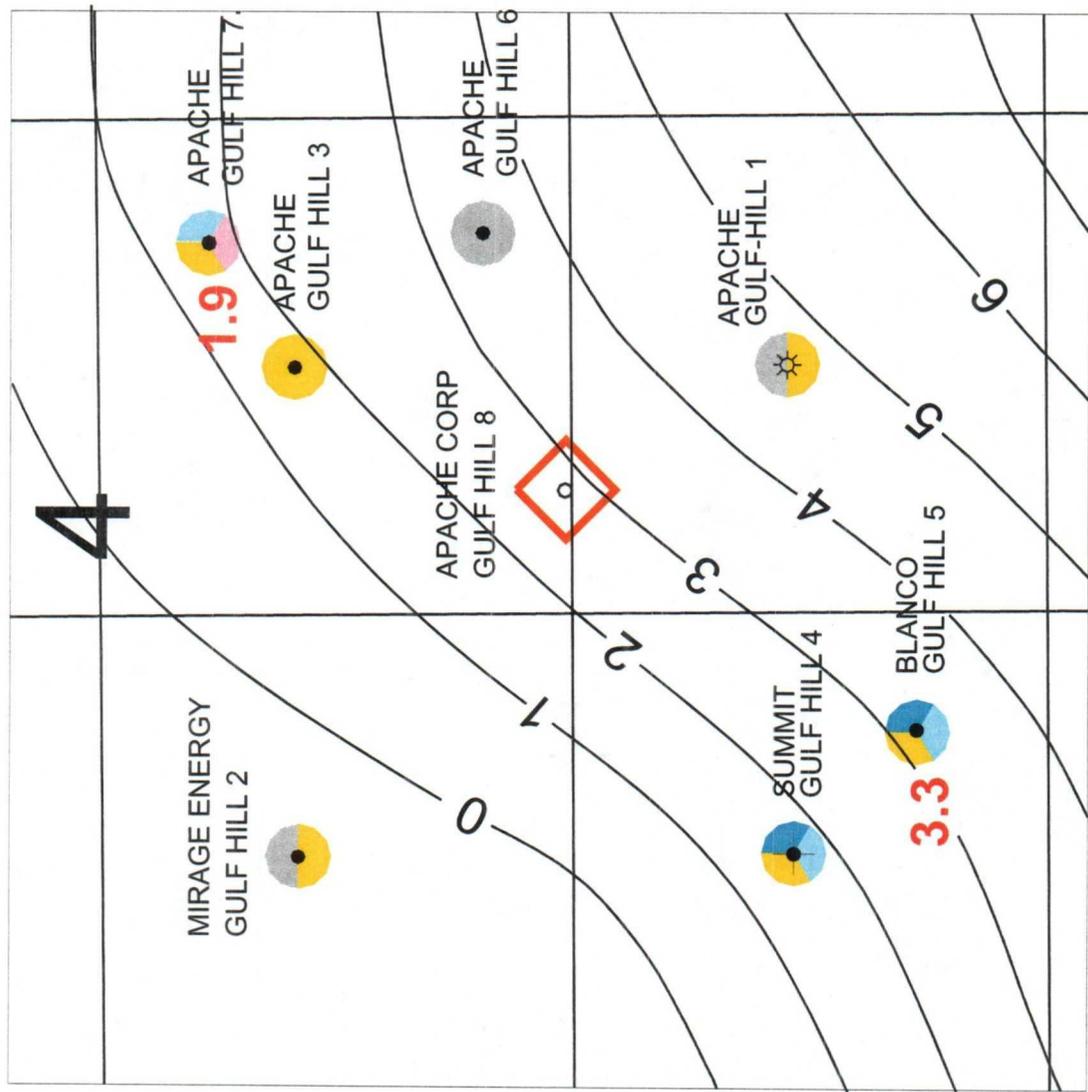
SEC 4-T21S-R37E
 LEA COUNTY, NEW MEXICO

EXHIBIT 6

DRKD SOPHIH

DATE: 7/15/05

DWG: CURTIS/OCD-NM/2005/GULF HILL 8/EX65



- YATES-SEVEN RIVERS-QUEEN
- GRAYBURG
- SAN ANDRES
- PADDOCK
- BLINEBRY
- TUBB
- DRINKARD
- ABO
- FUSSELMAN

