

DATE IN 3/14/06	SUSPENSE 4-3-06	ENGINEER MIKE Stagner	LOGGED IN 3/14/06	TYPE SD	APP NO. PTDS 0607336971
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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



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 _____

2006 MAR 13 PM 3 06

[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.

Ocean Munds-Dry

Print or Type Name

Ocean Munds-Dry

Signature

Attorney

Title

3-13-06

Date

omundsdry@hollanhard.com

e-mail Address

March 13, 2006

HAND DELIVERED

Mark E. Fesmire, P.E.
Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

Re: Application of Petrohawk Operating Company for administrative approval of an infill gas well and simultaneous dedication of State 157 G Well No. 5, 1880' FNL and 660' FEL, S5-T22S-R36E, Jalmat Gas Pool, Lea County, New Mexico.

Dear Mr. Fesmire:

Pursuant to the provisions of Rule 4(B) of the Special Pool Rules for the Jalmat Gas Pool, as promulgated by Division Order No. R-8170-P dated December 14, 2001, Petrohawk Operating Company ("Petrohawk"), formerly Mission Resources Inc. ("Mission") hereby seeks an administrative exception to the gas well density provisions of Rule 3(C) and authorization to simultaneously dedicate said well to the 120.02-acre non-standard spacing and proration unit approved by Order No. NSP-183-A, dated January 8, 2003.

Petrohawk seeks approval of the State 157 G Well No. 5 to be drilled at a standard location 1880 feet from the North line and 660 feet from the East line (Unit H), Section 5, Township 22 South, Range 36 East, NMPM, Jalmat Gas Pool, Lea County, New Mexico. The proposed well would be drilled within an existing 120.02-acre gas spacing unit comprising Lot 1 and the S/2 NE/4 (NE/4 equivalent) of said Section 5 to which is currently dedicated to the State 157 G Well No. 2 (**API No. 30-025-08787**). Therefore, Petrohawk also seeks approval to simultaneously dedicate the State 157 G Well No. 5 to the spacing unit in said Section 5.

The proposed well is necessary to facilitate the recovery of Jalmat gas reserves. Based on the geological discontinuity in the Jalmat the tighter spacing is anticipated to recover reserves, which cannot be recovered from existing wells. The wells will be completed



with modern completion and fracture stimulation techniques which will insure optimal recovery from the discontinuous Yates/Seven Rivers sands. **Exhibit 1** is a Top of Structure Map which shows the proposed well location in Section 5.

Exhibit 2 shows recovery of incremental reserves by this infill well has been confirmed by results of work in the field over the last six years. **Exhibit 3** is an economic analysis that shows the proposed well will be economic. The work of Raptor Resources, Inc. ("Raptor") and Mission was reviewed from August of 1999. Detailed information for the 20 Raptor and 12 Mission completions are listed on **Exhibit 2**. **Exhibit 4** shows the locations for this work. The average incremental recovery for these projects is 1055 MMCF. The monthly production data for each of these completions was normalized. The data was then averaged to produced a normalized production curve as shown on **Exhibit 5**. A best fit of the production data from the normalized curve, culling out the less reliable data when the well count drops dramatically results in a EUR of 1005 MMCF. Thus, both methods of reserve analysis results in an average well recovery of a little over 1 BCF.

Exhibit 6 is a cross-section showing the Yates and Seven Rivers sands vary substantially from well to well in thickness and reservoir quality. Given the variability of the sands, net pay isopach maps have not proven to be useful and are not included. Detailed correlations with newer generation Density-Neutron logs in the Yates and Seven Rivers interval reveal the sands "come and go" and are not blanket reservoirs. Sands that have not adequately produced in the area are expected in each new well bore.

Jalmat producers have been down-spaced on the Mission acreage from 160 acres to 80 acres to 40-acre spacing in several phases since 1989. New gas production and reserves have always been encountered from these efforts, as shown on **Exhibit 7**.

Exhibit 8 is the completion data and estimated EUR for the 40-acre locations around the proposed well. The State 157 G Well No. 4 has an EUR of 1.3 BCF. The State 157 G Well No. 2 initially produced 479 MCFD and would have a similar EUR if a casing leak had not damaged the Jalmat sands. The State A A/C 2 Well No. 28 and State A A/C 2 Well No. 34 will each make another 2.1 and 3.7 BCF respectively that otherwise would not have been recovered. The proposed well will be 300 feet south of State 157 G Well No 1-A which produced 409 MMCF from the Yates formation after a very small frac with 6000# of sand in 1955. This well was never perforated in the over 300 feet of Seven Rivers gross interval.

Many of the older wells had only small or no frac treatment and were not perforated or treated in a way to adequately contact every gas-bearing sand. In many cases, the Seven Rivers gas zones were not perforated at all. **Exhibit 8** shows that the older wells had fracs of only about 6,000 to 58,000 # of sand. Petrohawk is using a combination of limited entry perforating and pumping much large frac jobs (300K#) to insure that the entire Jalmat interval is stimulated. The designed fracture half length is approximately 300 feet. Petrohawk believes it is economically better to drill a new well wherever the

HOLLAND & HART^{LLP}



old casing integrity is questionable, so that a modern frac job can be done. Careful engineering of the frac job can then assure all potential sands are effectively drained.

Approval of this application will result in the efficient recovery of hydrocarbons, prevent waste and will not violate correlative rights.

Exhibit 9 is OCD Form C-102 depicting the proposed surface locations of the referenced wells.

Exhibit 10 lists the parties affected by this application. **Exhibit 11** is a base map displaying the offset operators. All proposed locations are at least 660 feet from any lease line. **Exhibit 12** is an affidavit confirming that notice of this application has been provided in accordance with the provisions of Rule 1210 (C) [and Rule 4(D)] by providing a copy of this application, including all attachments, to the affected parties by certified mail-return receipt requested in accordance with Rule 1210 (B) advising them that if they have an objection to this application it must be filed in writing with the Division's Santa Fe office within twenty days after filing of this application and proof of notice with the Division.

Also enclosed is a proposed administrative order of the Division.

Your attention to this application is appreciated.

Sincerely,

Ocean Munds-Dry
ATTORNEY FOR PETROHAWK ENERGY
CORPORATION

Enclosures

cc: Nancy Gatti, Petrohawk Energy Corp.
Oil Conservation Division - Hobbs

March 13, 2006

CERTIFIED MAIL
RETURN RECEIPT REQUESTED


TO OFFSET OPERATORS

Re: Application of Petrohawk Operating Company for administrative approval of an infill gas well and simultaneous dedication of State 157 G Well No. 5, 1880' FNL and 660' FEL, S5-T22S-R36E, Jalmat Gas Pool, Lea County, New Mexico.

Dear Ladies and Gentlemen:

Enclosed is a copy of the above-referenced application which was filed with the New Mexico Oil Conservation Division on this date by Petrohawk Operating Company for administrative approval of an infill gas well and simultaneous dedication for its proposed State 157 G Well No. 5, Jalmat Gas Pool, at a location 1880 feet from the North line and 660 feet from the East line of Section 5, Township 22 South, Range 36 East, N.M.P.M., Lea County, New Mexico. Petrohawk seeks to dedicate this well to an existing 120.02-acre gas spacing unit comprising Lot 1 and the S/2 NE/4 (NE/4 equivalent) of said Section 5 to which is currently dedicated to the State 157 G Well No. 2.

As an owner of an interest that may be affected by the proposed well, you may object to this application. Objections must be filed in writing within twenty days from this date at the Division's Santa Fe office that is located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. If no objection is received within this twenty-day period, this application for an infill gas well location may be approved.

Sincerely,

Ocean Munds-Dry
Attorney for Petrohawk Operating
Company

Enclosures

Attention: Ms. Nancy Gatti

Administrative Order - _____

Dear Ms. Gatti:

Reference is made to your application dated March 10, 2006 for an infill gas well and simultaneous dedication for its proposed State 157 Well No. 5, Jalmat Gas Pool, at a location 1880 feet from the North line and 660 feet from the East line of Section 5, Township 22 South, Range 36 East, N.M.P.M., Lea County, New Mexico.

The proposed well will be simultaneously dedicated to an existing 120.02-acre gas spacing unit comprising Lot 1 and the S/2 NE/4 (NE/4 equivalent) of said Section 5 to which is currently dedicated to the State 157 G Well No. 2 (**API No. 30-025-08787**).

This application has been duly filed under the provisions of the "Special Pool Rules for the Jalmat Gas Pool," as promulgated by Division Order No. R-8170-P, issued in Case No. 12563 on December 14, 2001.

By authority granted me under the provisions of Rules 4(A), (B), and (D) of the special rules governing the Jalmat Gas Pool, the following described well within this 120.04-acre spacing unit is hereby approved:

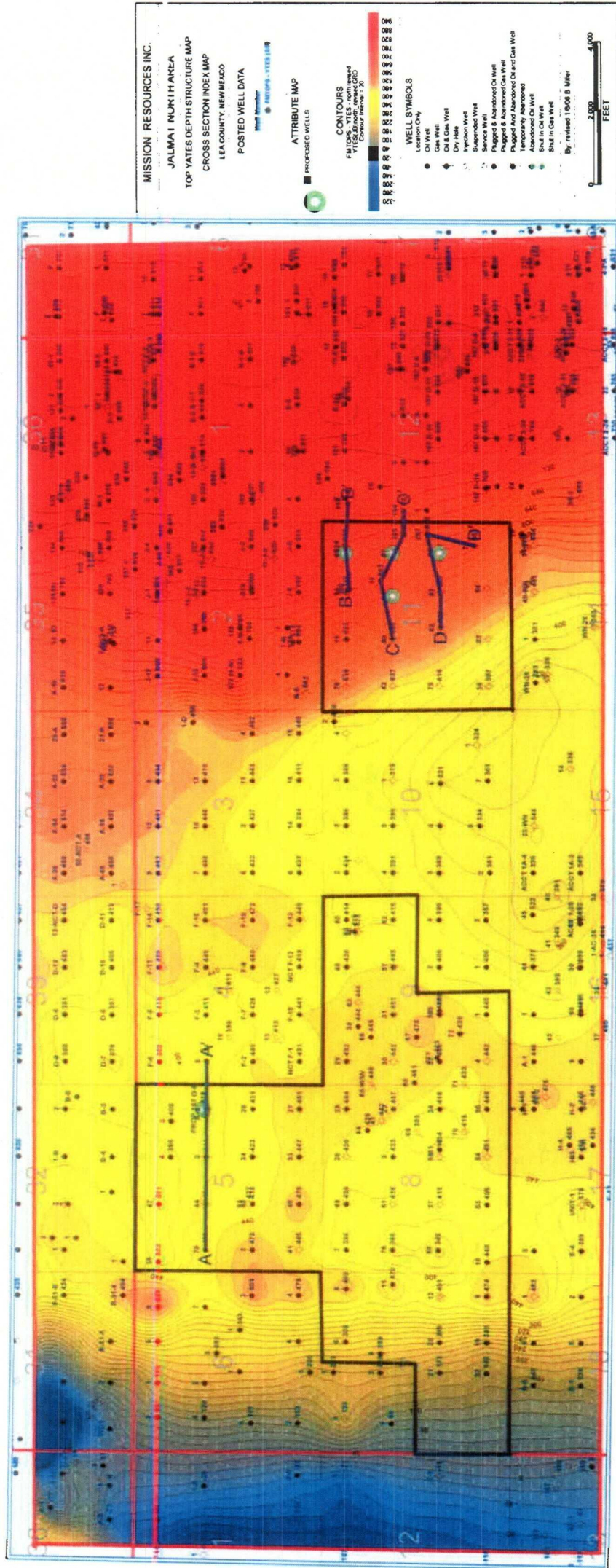
State 157 G Well No. 5
2280' FNL and 750' FEL of Section 5

Further, Petrohawk is hereby authorized to simultaneously dedicate Jalmat gas production from both the above-described State 157 G Wells No. 2 and No. 5.

Sincerely,

Mark E. Fesmire, P.E.
Director

cc: Oil Conservation Division - Hobbs



Jalmat - New Drill - Economics Summary Table

Input:

WI = 100 %	RI = 82.5%	
Assumed Prod Start Date = 2-1-06		
Initial Rate = 242 mcf/d + 0 bopd		
di = 40%		(from normalized type curve)
n = 3.5		(from normalized type curve)
NGL Yield = 138 bbls/mmcft		(from normalized type curve)
1-Gas Shrinkage = 59%		(from plant statements)
Plant Takes = 13% of residue gas & ngl's		(from plant statements)
Gas Price = \$7.40/mcf flat		(contract with plant)
Oil Price = \$55/stb flat		(adj for differentials from NYMEX (-\$.60/mcf))
NGL Price = \$39.05/stb flat		(no oil in economics)
OP Cost = \$1207/well/mth		(71% of Oil)
Assumed Drill Date = 1-1-06		(actuals from los statement)
CWC = 607 M\$		(latest AFE est)

Results:

8/8ths Reserves = 1005 mmcf
 NPV @ 10% = 1455 M\$
 ROR = 66%
 Payout = 21 mths
 ROI = 9.1

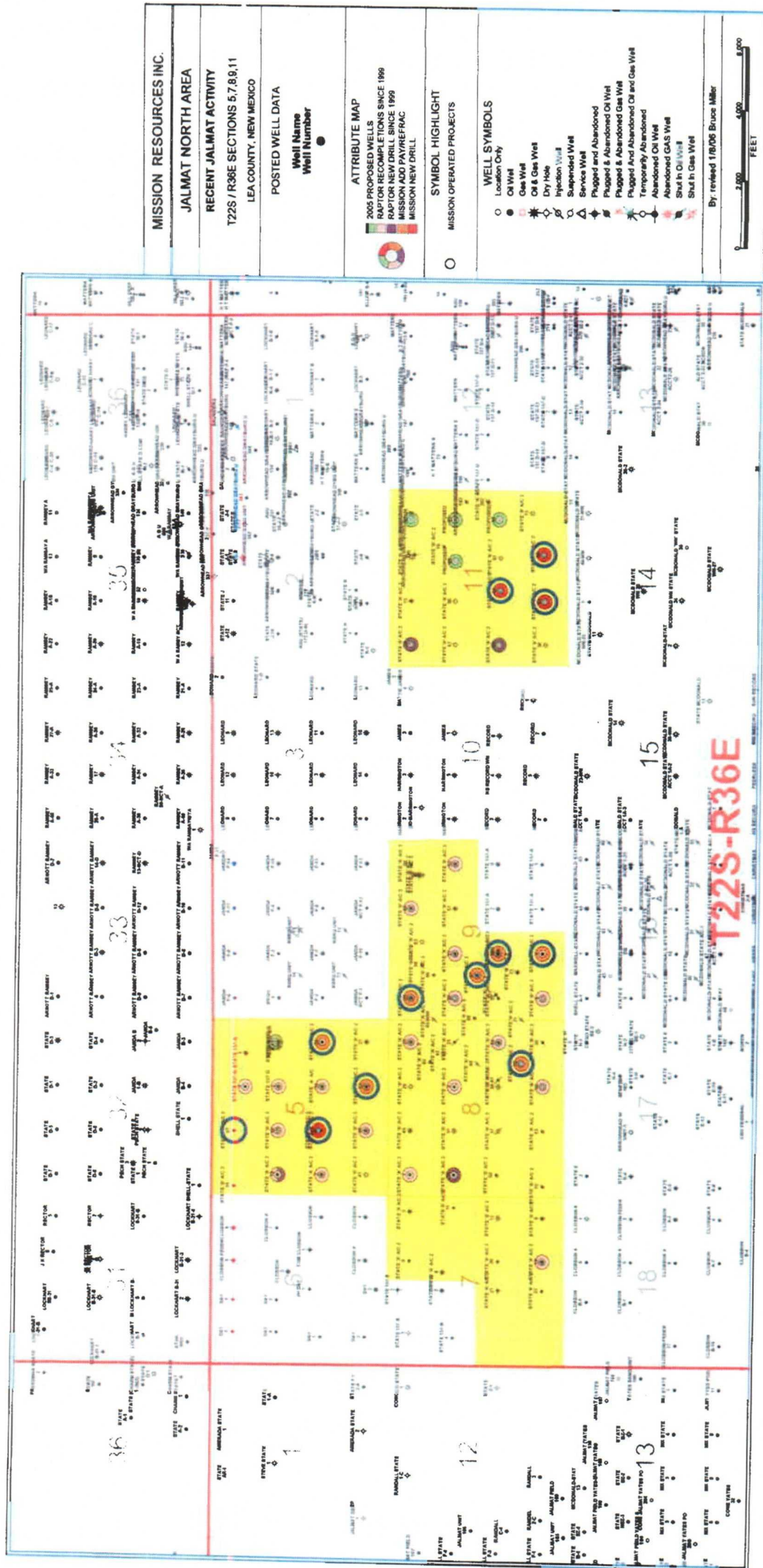


EXHIBIT 4

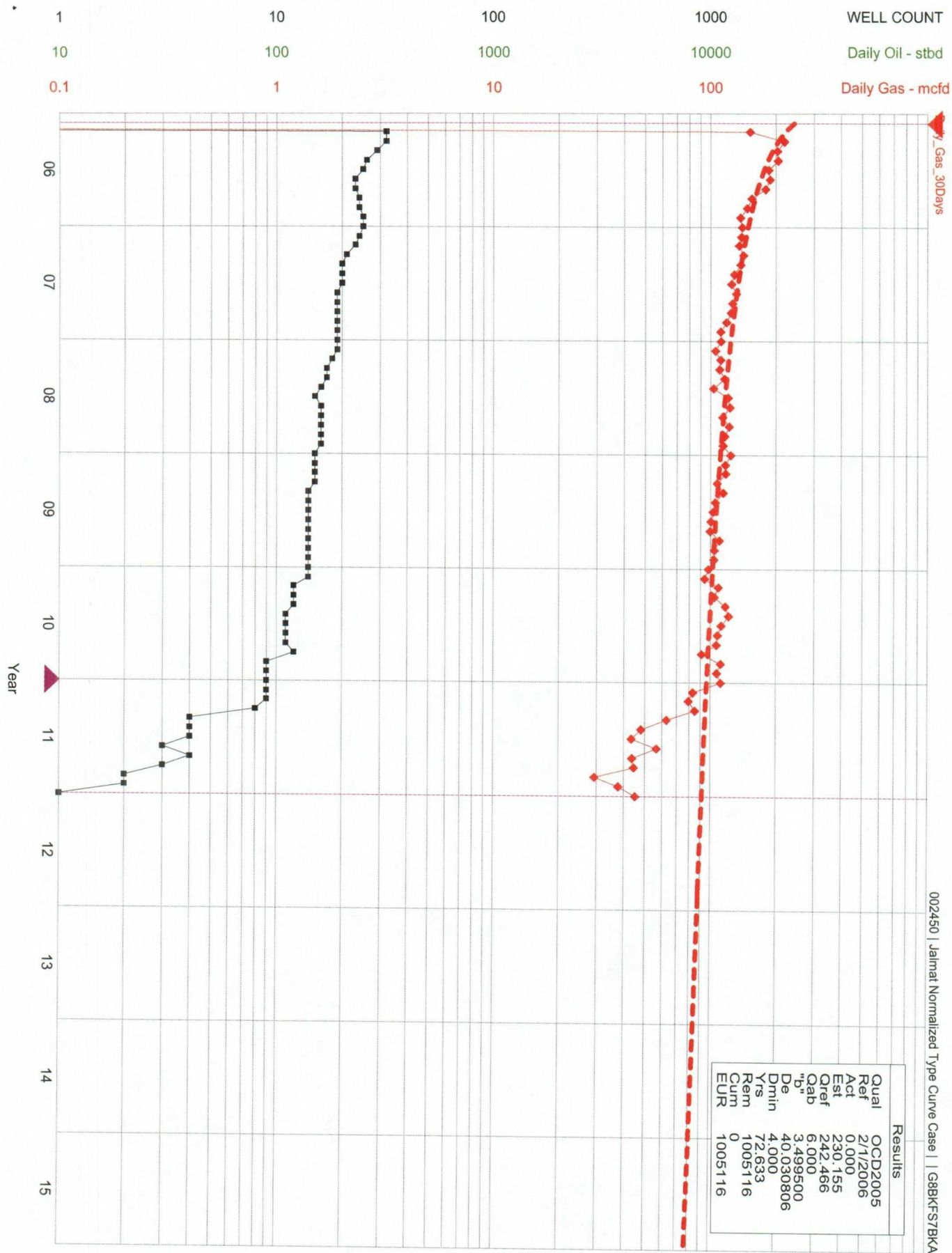
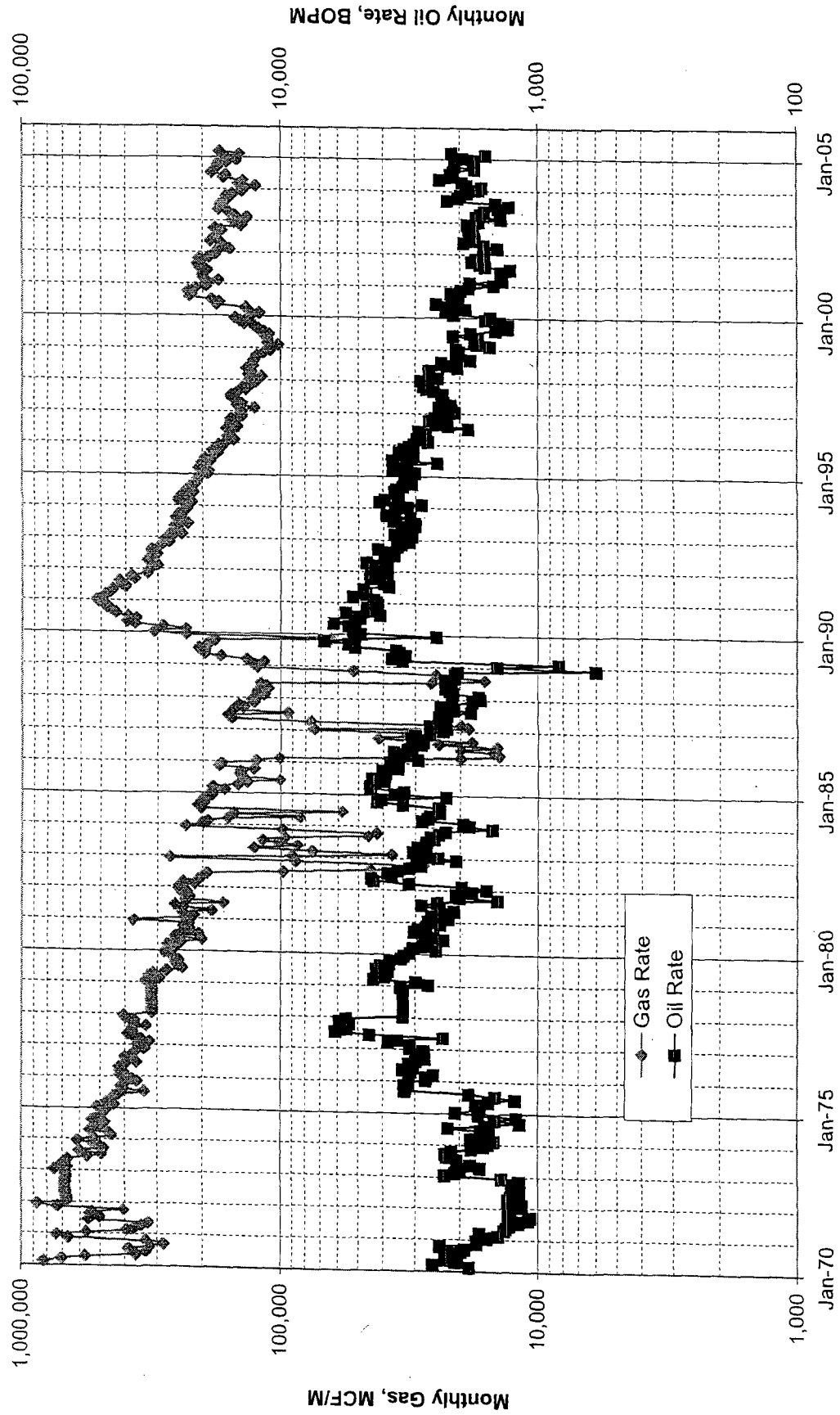


EXHIBIT 5

Mission Leases
Jalmat Field
Lea County, New Mexico



OFFSET JALMAT WELLS FOR NEW WELL 157G-5 (REDRILL OF STATE 157 G-1A)									
SECTION: 5		SPOT: H		T22S R36E					
JALMAT FIELD, LEA CO, NM									
Well #	Sec/spot	Comp date	Zones	Pay interval	Treatment	Cum MMCF	Cur rate MCFD	Status	EUR
40-acre offsets, Sec 5:									
157G-3	5A	Jun-65	Y-7R	3193-3571	20K# SD	414	0	P&A 4/70	414
157G-4	5B	May-00	Y-7R	3206-3681	190K# SD	233	96	OIL	1303
157G-2	5G	Oct-00	Y-7R	3224-3670	190K# SD	115	3	GAS	115
157G-1	5H	Oct-43	SE					P&A 8/55	
157G-1A	5H	Sep-55	Y-7R	3232-3370	6K# SD	409	0	TA 7/74	409
				To be redrilled					
AAC2 #28	5I	Nov-89	Y-7R	3170-3365	58K# SD				
		Jun-04	Y-7R	3170-3594	300K# SD	166	130	OIL	2216
AAC2 #34	5J	Aug-00	Y-7R	3183-3654	190K# SD	790	242	GAS	3740
40-acre offsets, Sec 4 operated by XTO:									
SRQU 6	4D	Aug-56	SE					TA 11/94	
SRQU 5	4E	Sep-59	Y-7R	3370-3400	30K# SD	170	0	P&A 11/84	170
SRQU 2	4L	Nov-43	SE					OIL	
Legend:									
T = Tansil									
Y = Yates									
7R = Seven Rivers									
SE = South Eunice (Queen) Pool									
EUM = Eunice Pool (Y-7R & Queen)									
GRBG = Grayburg									

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name STATE 157 G	Well Number 5
OGRID No.	Operator Name PETROHAWK ENERGY CORPORATION	Elevation 3596'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	5	22 S	36 E		1880	NORTH	660	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 Infill	Consolidation Code	Order No.						

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

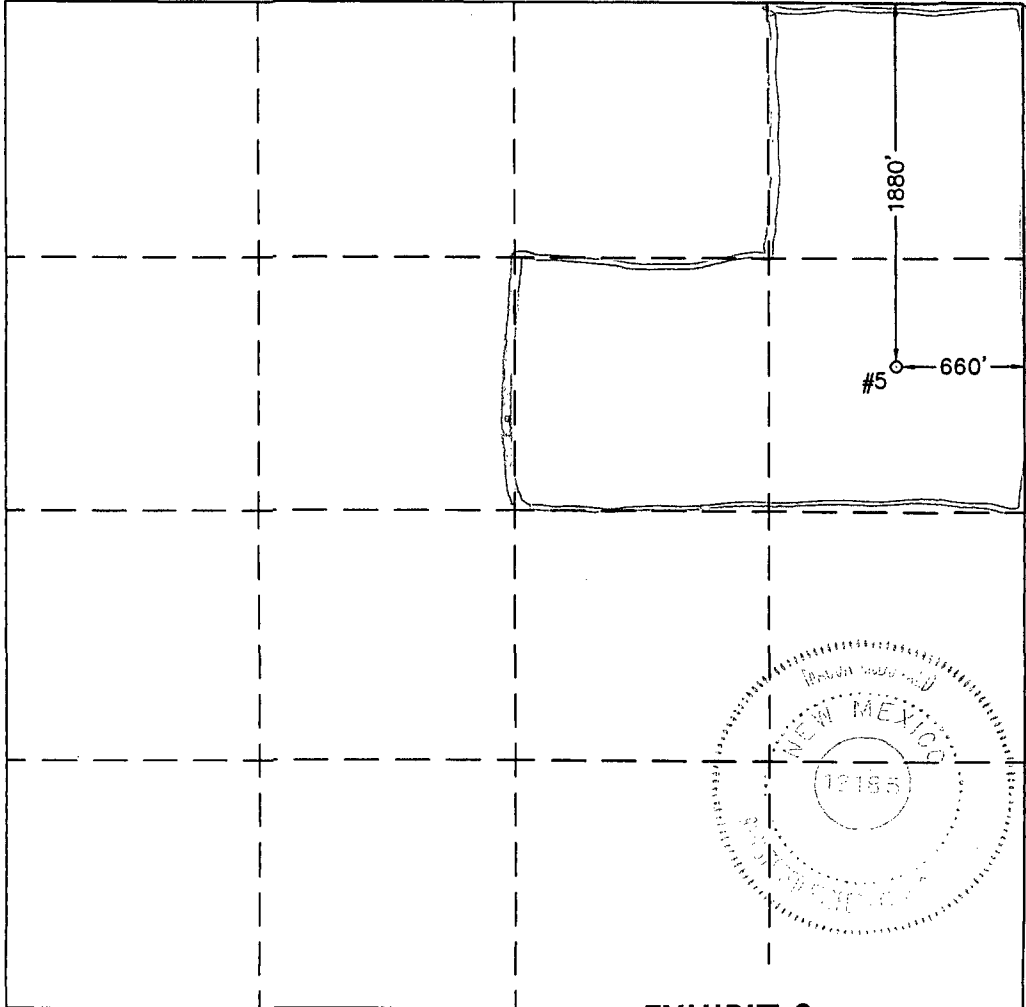
	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature _____</p> <p>Printed Name _____</p> <p>Title _____</p> <p>Date _____</p> <p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well 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>December 5, 2005</p> <p>Date Surveyed _____ JSR</p> <p>Signature & Seal of Professional Surveyor _____</p> <p>W.O. Num. 2005-1167</p> <p>Certificate No. MACON McDONALD 12185</p>
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EXHIBIT 10

Affected Parties

**State 157 G Well No. 5
Section 5, Township 22 South, Range 36 East, NMPM
Lea County, New Mexico.**

XTO Energy, Inc.
810 Houston Street, #2000
Fort Worth, TX 76102-6298

Chesapeake Operating, Inc.
P O Box 18756
Oklahoma City, OK 73154

ChevronTexaco
1111 Bagby Street
Houston, TX 77002

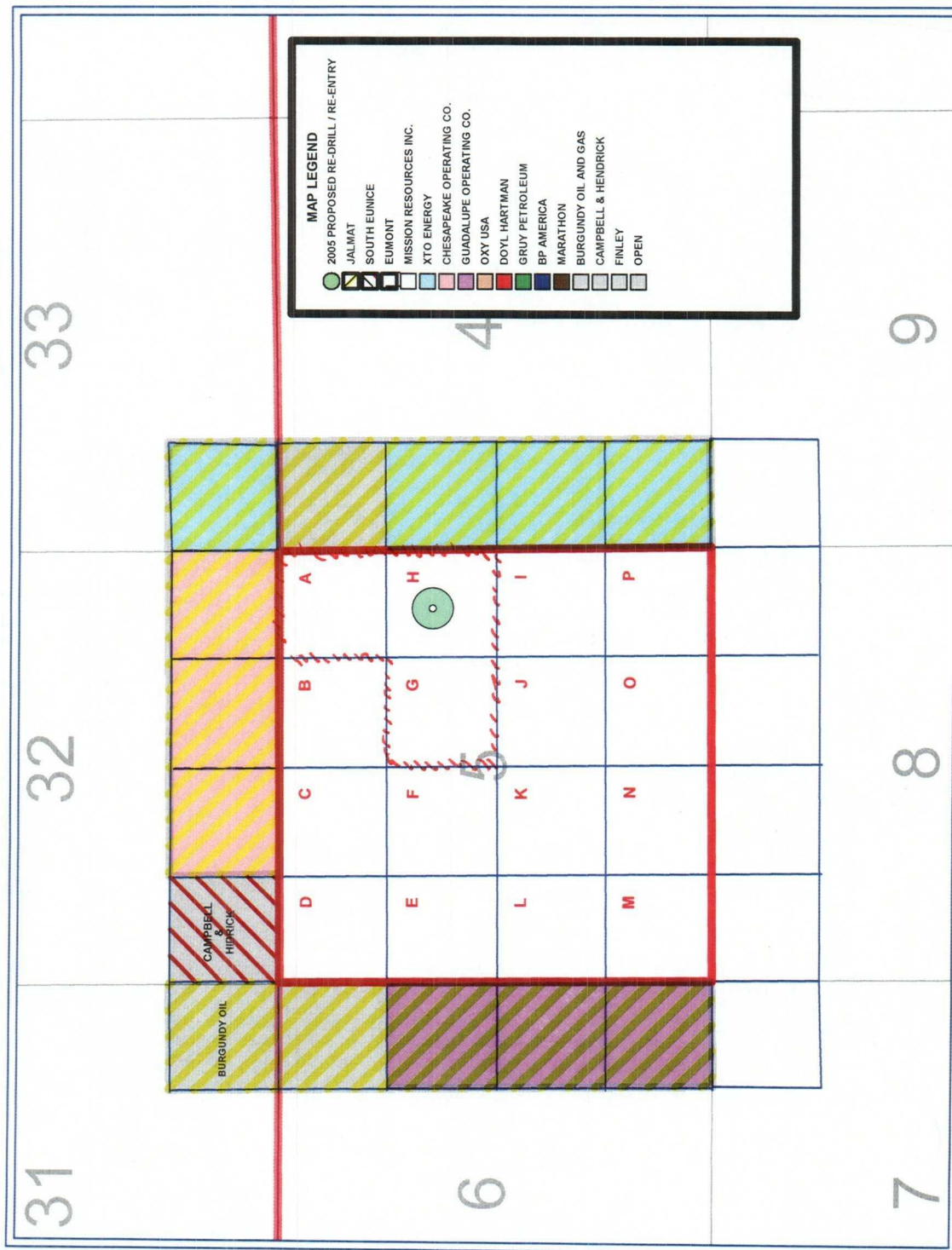


EXHIBIT 11

**BEFORE THE
OIL CONSERVATION DIVISION
NEW MEXICO ENERGY, MINERALS AND
NATURAL RESOURCES DEPARTMENT**

1