

Petrohawk (P)

cc



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

July 31, 2006

**Mark E. Fesmire, P.E.**

Director

Oil Conservation Division

**Petrohawk Operating Company**  
c/o **Holland & Hart LLP**  
**P. O. Box 2208**  
**Santa Fe, New Mexico 87504-2208**

**Attention: Ms. Ocean Munds-Dry**

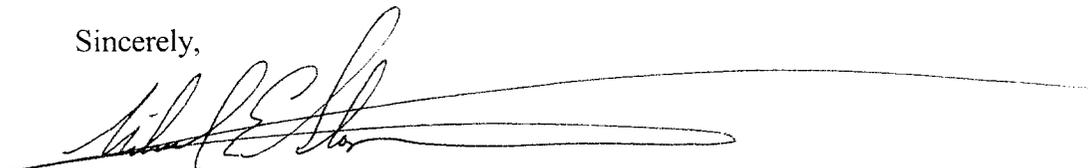
**Re:** *Administrative application (Division reference No. pTDS0-617438230) on behalf of Petrohawk Operating Company ("Petrohawk") filed with the Division on June 22, 2006 for an exception to the well density requirements, Rule 3 (C) of the "Special Pool Rules for the Jalmat Gas Pool (79240)," as promulgated by Division Order No. R-8170-P, issued in Case No. 12563 on December 14, 2001, within an existing non-standard 520-acre Jalmat gas spacing unit comprising the S/2 NE/4 and N/2 SE/4 of Section 9 and the W/2 of Section 10, both in Township 23 South, Range 36 East, NMPM, Lea County, New Mexico [see Ordering Paragraph No. (8) of Exhibit "A" in Division Order No. R-9073, issued in Case No. 9775 on December 14, 1989.]*

Dear Ms. Munds-Dry:

Petrohawk's proposed re-entry into and re-completion of the State "A" A/C-1 Well No. 86 (*API No. 30-025-09296*) as a Jalmat gas well in Unit "F" of Section 10 would be in violation of Rule 3 (D) of the Jalmat special pool rules where Petrohawk all ready operates its State "A" A/C-1 Well No. 37 (*API No. 30-025-09290*) as a Jalmat gas well within the same quarter-quarter section.

Your application is therefore **denied** and is being returned to you.

Sincerely,



Michael E. Stogner  
Engineer

MES/ms

cc: New Mexico Oil Conservation Division – Hobbs  
New Mexico State Land Office – Santa Fe  
File: SD-01-09

 You replied on 7/27/2006 4:52 PM.

**Stogner, Michael, EMNRD**

**From:** Ocean Munds-Dry [Omundsdry@hollandhart.com]

**Sent:** Wed 7/26/2006 3:23 PM

**To:** Stogner, Michael, EMNRD

**Cc:**

**Subject:** Petrohawk application for Simultaneous Dedication

**Attachments:**

Mr. Stogner:

We filed an application on behalf of Petrohawk Operating on June 21, 2006 for administrative approval of infill gas wells and simultaneous dedication in S8-T22S-R36E (in addition to 3 other similar applications). Petrohawk has informed me that they have a rig available on August 1 which they would like to utilize. Would you please let me know the status of this application and if you have any questions or concerns?

As always, I appreciate your time and attention to this matter.

Thank you,  
Ocean

**Ocean Munds-Dry**  
Holland & Hart LLP  
110 N. Guadalupe Suite 1  
Santa Fe, NM 87501  
Phone (505) 988-4421  
Fax (866) 851-8340  
E-mail: Omundsdry@hollandhart.com

**HOLLAND & HART** 

**CONFIDENTIALITY NOTICE:** This message is confidential and may be privileged. If you believe that this email has been sent to you in error, please reply to the sender that you received the message in error; then please delete this e-mail. Thank you.

Petrohawk

DATE IN 6/22/06	SUSPENSE	ENGINEER MIKE STOGGER	LOGGED IN 6/23/06	TYPE SD	APP NO. PTD50617438230
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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

2006 JUN 22 PM 4 17  


### 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.

Ocean Muds-Dry Ocean Muds-Dry Attorney 6-22-06  
 Print or Type Name Signature Title Date  
omudsdry@hollandhart.com  
 e-mail Address

HOLLAND & HART<sup>LLP</sup>



Ocean Munds-Dry

2006 JUN 22 11:17 AM  
omundsdry@hollandhart.com

June 22, 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

*30-025-09296*

Re: Application of Petrohawk Operating Company for administrative approval of an infill gas well and simultaneous dedication of State "A" A/C 1 Well No. 86, 1980' FNL and 1980' FWL, S10-T23S-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") hereby seeks an administrative exception to the gas well density provisions of Rule 3(C) and authorization to simultaneously dedicate said wells to the non-standard 520-acre spacing and proration unit originally approved by Order No. R-9073, dated December 14, 1989, as amended by Order R-9073-B, dated December 14, 1989.

Petrohawk seeks approval of the following well in Section 10, Township 23 South, Range 36 East, NMPM, Lea County, New Mexico:

The State "A" A/C 1 Well No. 86 to be re-entered and re-completed at a standard location 1980 feet from the North line and 1980 feet from the West line (Unit F).

Holland & Hart LLP

Phone [505] 988-4421 Fax [505] 983-6043 [www.hollandhart.com](http://www.hollandhart.com)

110 North Guadalupe Suite 1 Santa Fe, NM 87501 Mailing Address P.O. Box 2208 Santa Fe, NM 87504-2208

Aspen Billings Boise Boulder Cheyenne Colorado Springs Denver Denver Tech Center Jackson Hole Salt Lake City Santa Fe Washington, D.C. ☺



The proposed wells would be drilled within an existing 520-acre non-standard gas spacing unit comprised of the S/2 NE/4, N/2 SE/4 and SE/4 SE/4 of Section 9 and the W/2 of Section 10. Therefore, Petrohawk also seeks approval to simultaneously dedicate these wells to this spacing unit.

Administrative Order SD-01-09, dated December 19, 2001, authorized the simultaneous dedication of the following ten wells to the non-standard 520-acre gas spacing and proration unit for the Jalmat Gas Pool:

State "A" A/C 1 Well No. 37 (API No. 30-025-09290) located 1650 feet from the North line and West lines (Unit F) of Section 10;

State "A" A/C 1 Well No. 38 (API No. 30-025-09291) located 990 feet from the South and West lines (Unit M) of Section;

State "A" A/C 1 Well No. 49 (API No. 30-025-09292) located at an unorthodox location 660 feet from the North and West lines (Unit D) of Section 10;

State "A" A/C 1 Well No. 55 (API No. 30-025-09293) located 1980 feet from the North line and 660 feet from the West line (Unit E) of Section 10;

State "A" A/C 1 Well No. 81 (API No. 30-025-09295) located at an unorthodox location 660 feet from the North line and 1980 feet from the West line (Unit C) of Section 9;

State "A" A/C 1 Well No. 88 (API No. 30-025-09297) located at an unorthodox location 1980 feet from the South and West lines (Unit K) of Section 10;

State "A" A/C 1 Well No. 89 (API No. 30-025-09298) located at an unorthodox location 660 feet from the South line and 1980 feet from the West line (Unit N);

State "A" A/C 1 Well No. 130 (API No. 30-025-35552) located at an unorthodox location 660 feet from the South and East lines (Unit P) of Section 9;

State "A" A/C 1 Well No. 131 (API No. 30-025-35556) located at an unorthodox location 1980 feet from the South line and 660 feet from the East line (Unit I) of Section 9; and

State "A" A/C 1 Well No. 56 (API No. 30-025-09294) at a location 1980 feet from the South line and 660 feet from the West line (Unit L) of Section 10.

The proposed wells are 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 ensure optimal recovery from the discontinuous Yates/Seven Rivers sands. **Exhibit 1** is a Base Map showing recent Jalmat activity and the proposed well location in Section 10. **Exhibit 2** is a Top of Structure Map with Petrohawk's acreage position in Section 10 outlined.

**Exhibits 3 through 7** are cross-sections 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 Petrohawk 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 8**. Petrohawk concludes that this area of Jalmat Field has such discontinuous sand reservoirs that infill drilling on 40-acre spacing is required to adequately drain the existing reserves.

The work of Raptor Resources, Inc. ("Raptor"), Mission Resources Corporation ("Mission") and Petrohawk was reviewed from April of 1999 through 2005. All of the new drills and re-completions (32) in Township 22 South, Range 36 East were studied to develop a type curve for the area. The monthly production data for each of these completions was normalized. The data was then averaged to produce a normalized production curve as shown on **Exhibit 9**. Detailed information for all the Mission/Petrohawk completion since Mission took over as operator in March 2004 are listed on **Exhibit 10**. The first month average initial rate for these projects is 149 mcf/d. Anticipated reserves per location were determined by using the average initial rate with the decline scenario developed from the type curve. The result of this analysis yields an Estimated Ultimate Recovery of 704 MMCFG.

Economic analysis was performed based on the average initial rates realized (See Exhibit 10) in the Mission/Petrohawk wells completed and using a normalized type curve (See Exhibit 9) designed by studying all completions from 1999 through 2005 on the Petrohawk acreage for the decline rate and hyperbolic exponent. **Exhibit 12** lists the details of the input and the results of the economics. The gas is extremely rich with an NGL yield of 136 bbls/mmcft. The processing plant takes 13% of the residue gas and NGL's. Gas shrinkage was based on plant statements. The gas price used in the analysis was \$6.00/mcf flat. No condensate was included in the run. The NGL price was 71% of the oil price (\$60/stb) and thus was \$42.60/bbl flat. This percentage was determined by comparing the actual prices received to NYMEX oil prices. The operating cost is the



average per producing well cost in the field. Our operations group provided the CWC for both new drills and re-completes. The results of the analysis show a EUR of 704 MMCF. The new drill wells have an NPV @ 10% - 821 M\$, Rate of Return = 36%, payout in 40 months, and a return on investment ratio of 6.1. The re-completes have an NPV @ 10% = 1,039 M\$, Rate of Return = 65%, payout in 26 months, and a return on investment ratio of 9.3. In summary, either drilling or re-completing wells on 40-acres with the discontinuous nature of the sands is extremely economic.

**Exhibit 11** is the completion data and estimated EUR for the 40-acre locations around the proposed well. In Unit Letter F of Section 10, the surrounding 40-acre wells have produced 4,755 MMCF, and will make another 60 MMCF. Three wells (Nos. 55, 37 and 56) were either not frac'd or treated with small fracs. Well No. 86 has produced out of the Queen formation, is currently T&A'd and will be re-completed to the Yates-Seven Rivers. Well No. 37 is a Yates-only natural completion that is currently only making 1mcf/d. This well will be shut in with the completion of the Well No. 86.

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 11** shows that seven of the offsets in Section 10 had fracture treatments exceeding 100,000 # of sand – all but one completed after 1999. The older wells, if they were frac'd, had fracs of only 20,000 to 60,000 # of sand. Petrohawk is using a combination of limited entry perforating and pumping much larger frac jobs (300K#) to ensure that the entire Jalmat interval is stimulated. The designed fracture half length is approximately 300 feet. 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 13** lists the parties affected by this application as defined by Rule 1210. **Exhibit 14** is a map displaying the offset operators around the spacing unit in Section 22. **Exhibit 15** is an affidavit confirming that notice of this application has been provided in accordance with the provisions of Rule 4(D) and Rule 1210(B) by providing a copy of this application, including all attachments, to the affected parties by certified mail-return receipt requested 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 (20) days after the filing of this application and proof of notice with the Division.

**Exhibit 16** is OCD Form C-102 depicting the proposed surface location of the referenced well.

Also enclosed is a proposed administrative order of the Division.

HOLLAND & HART  LLP

Sincerely,

*Ocean Munds-Dry*

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 June 22, 2006 for an infill gas well and simultaneous dedication for its proposed State "A" A/C 1 Well No. 86, 1980' FNL and 1980' FWL, S10-T23S-R36E, Jalmat Gas Pool, Lea County, New Mexico.

The proposed wells will be simultaneously dedicated to an existing 520-acre gas spacing unit comprising Section 10 which is currently dedicated to the State "A" A/C 1 Well No. 37 (Unit F) of Section 10; State "A" A/C 1 Well No. 38 (Unit M) of Section 10; State "A" A/C 1 Well No. 49 of Section 10; State "A" A/C 1 Well No. 55 (Unit E) of Section 10; State "A" A/C 1 Well No. 81 (Unit C) of Section 9; State "A" A/C 1 Well No. 88 (Unit K) of Section 10; State "A" A/C 1 Well No. 89 (Unit N) of Section 10; State "A" A/C 1 Well No. 130 (Unit P) of Section 9; State "A" A/C 1 Well No. 131 (Unit I) of Section 9; and State "A" A/C 1 Well No. 56 (Unit L) of Section 10.

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 wells within this 520-acre spacing unit is hereby approved:

The State "A" A/C 1 Well No. 86 to be re-entered and re-completed at a standard location 1980 feet from the North line and 1980 feet from the West line (Unit F).

Further, Petrohawk is hereby authorized to simultaneously dedicate Jalmat gas production from the above-described wells.

Sincerely,

Mark E. Fesmire, P.E.  
Director

cc: Oil Conservation Division - Hobbs/Artesia



June 22, 2006

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

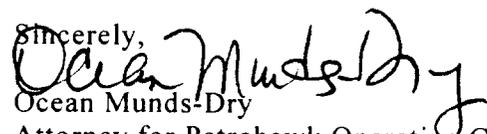
Re: Application of Petrohawk Operating Co. for administrative approval of infill gas wells and simultaneous dedication of State "A" A/C 1 Well No. 86, 1980' FNL and 1980' FWL, S10-T23S-R36E, Jalmat Gas Pool, Lea County, New Mexico.

Dear Ladies and Gentlemen:

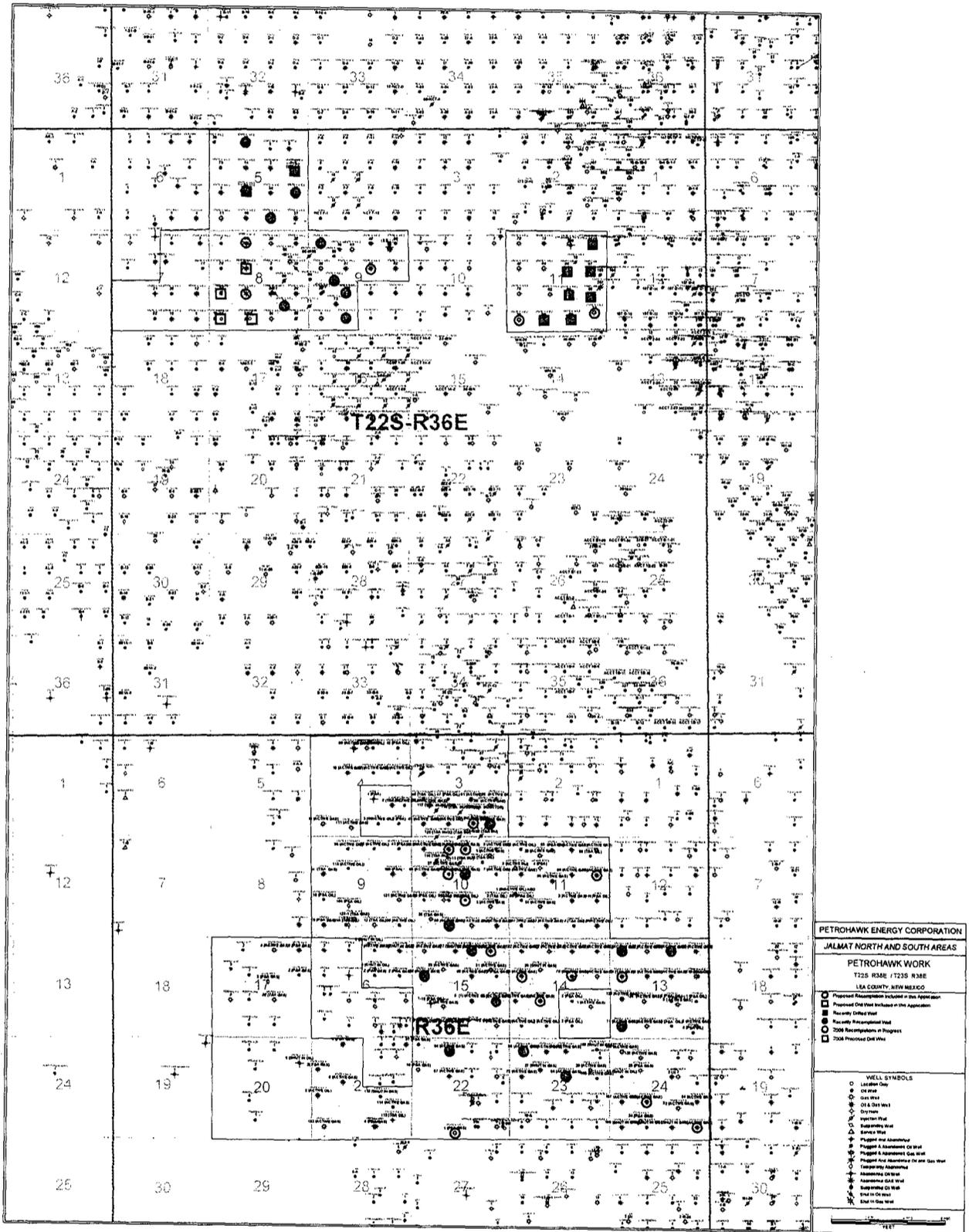
Enclosed is a copy of the above-referenced application which was filed with the New Mexico Oil Conservation Division on this date by Petrohawk Operating Company for administrative approval of an infill gas well and simultaneous dedication for its proposed State "A" A/C 1 Well No. 86, 1980' FNL and 1980' FWL, S10-T23S-R36E, Jalmat Gas Pool, Lea County, New Mexico.

Petrohawk seeks to dedicate this well to an existing 520-acre gas spacing unit comprising Section 9 and 10 which is currently dedicated to the State "A" A/C 1 Well No. 37 (Unit F) of Section 10; State "A" A/C 1 Well No. 38 (Unit M) of Section 10; State "A" A/C 1 Well No. 49 of Section 10; State "A" A/C 1 Well No. 55 (Unit E) of Section 10; State "A" A/C 1 Well No. 81 (Unit C) of Section 9; State "A" A/C 1 Well No. 88 (Unit K) of Section 10; State "A" A/C 1 Well No. 89 (Unit N) of Section 10; State "A" A/C 1 Well No. 130 (Unit P) of Section 9; State "A" A/C 1 Well No. 131 (Unit I) of Section 9; and State "A" A/C 1 Well No. 56 (Unit L) of Section 10.

As an owner of an interest that may be affected by these proposed wells, 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 may be approved.

Sincerely,  
  
Ocean Munds-Dry  
Attorney for Petrohawk Operating Co.

Enclosures



**PETROHAWK ENERGY CORPORATION**  
**JALMAT NORTH AND SOUTH AREAS**  
**PETROHAWK WORK**  
 T22S R36E / T23S R36E  
 LSA COUNTY, NEW MEXICO

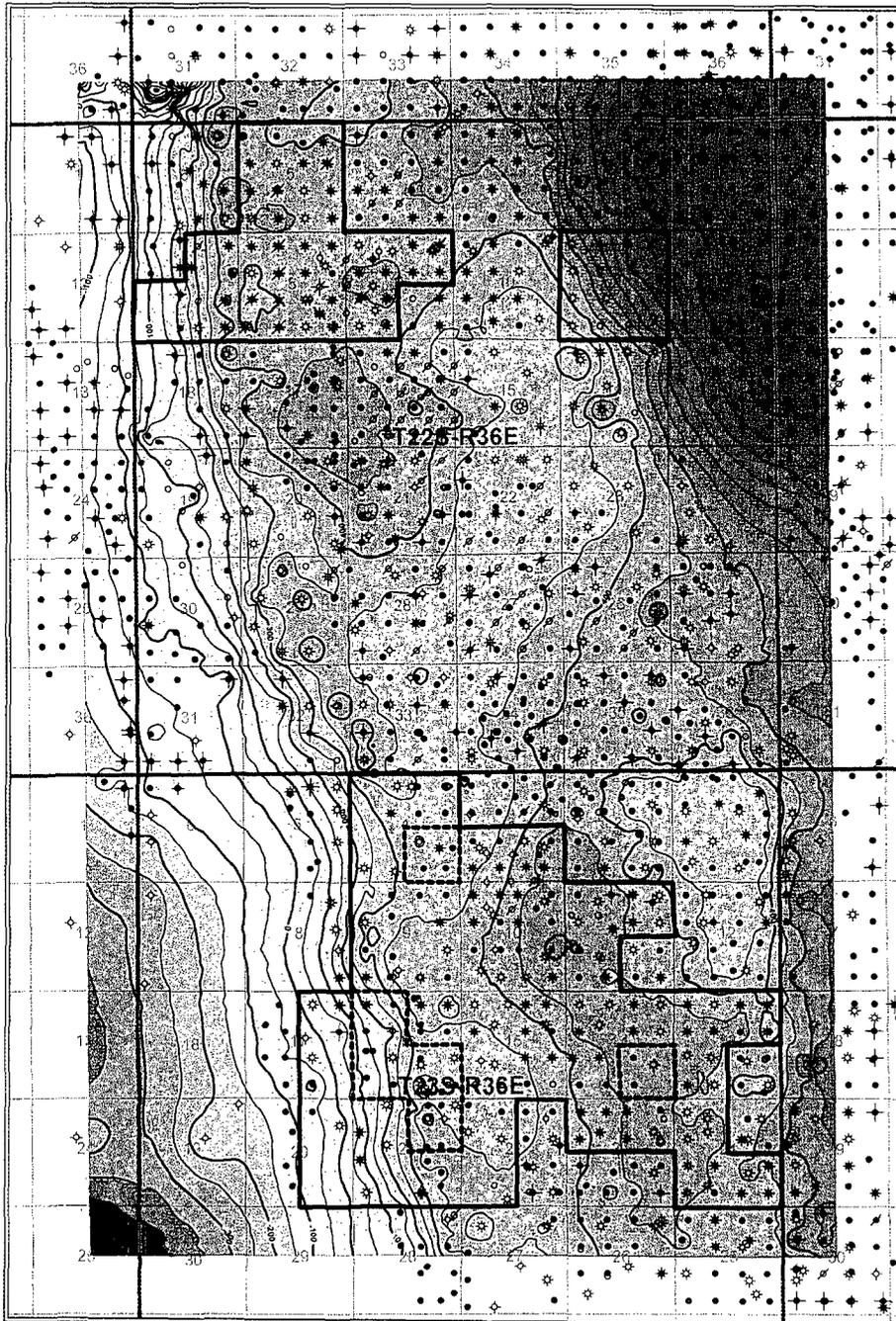
Proposed Recreations included in this Application  
 Proposed Oil Well included in this Application  
 Recently Drilled Well  
 Recently Reappraised Well  
 2008 Recreations in Progress  
 2008 Proposed Oil Well

**WELL SYMBOLS**

- Leased Well
- Oil Well
- Gas Well
- Oil & Gas Well
- Dry Hole
- Injection Well
- Aquifer Well
- Sewer Well
- Plugged and Abandoned
- Plugged & Abandoned Oil Well
- Plugged & Abandoned Gas Well
- Plugged and Abandoned in one day well
- Temporary Abandoned
- Abandoned Oil Well
- Abandoned Gas Well
- Shut in Oil Well
- Shut in Gas Well

0 100 200 FEET

**EXHIBIT 1**



PETROHAWK ENERGY CORPORATION

LEA JALMAT AREA

TOP YATES DEPTH STRUCTURE MAP

LEA COUNTY, NEW MEXICO

CONTOURS  
 FM TOPS - FTES (GGS) -  
 FTES (GGS)  
 Contour Interval = 50

WELL SYMBOLS

- Location Only
- Oil Well
- ⊙ Gas Well
- ⊗ Oil & Gas Well
- ◇ Dry Hole
- ⊕ Injection Well
- ⊖ Suspended Well
- △ Service Well
- ⊘ Plugged and abandoned
- ⊙ Shut In Oil and Gas
- ⊗ Plugged & Abandoned Oil Well
- ⊙ Plugged & Abandoned Gas Well
- ⊗ Plugged and Abandoned Oil and Gas Well
- ⊖ Drilled Water-control Well
- ⊙ Shut-In Well
- ⊖ Temporarily Abandoned
- ⊙ Abandoned Water Injector
- ⊙ Abandoned Oil Well
- ⊙ Abandoned GAS Well

REMARKS  
 TOPS FROM GDS DATA BASE:

0 4,000 8,000  
 FEET



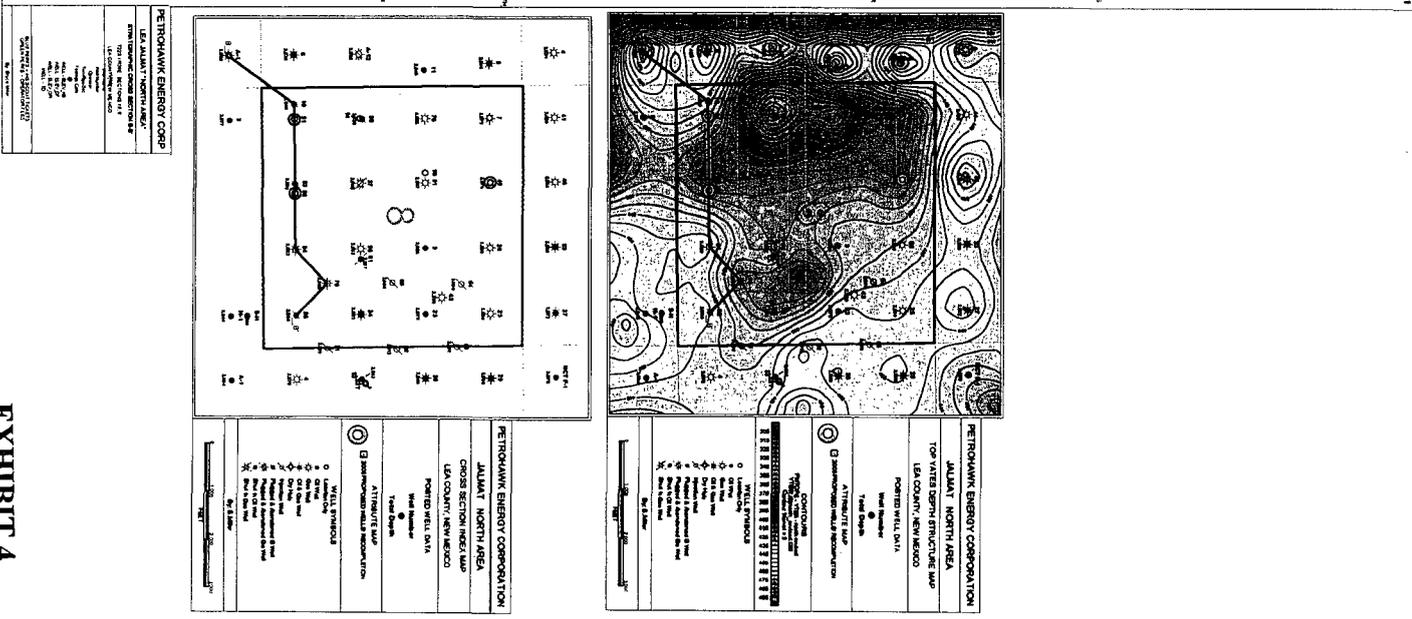
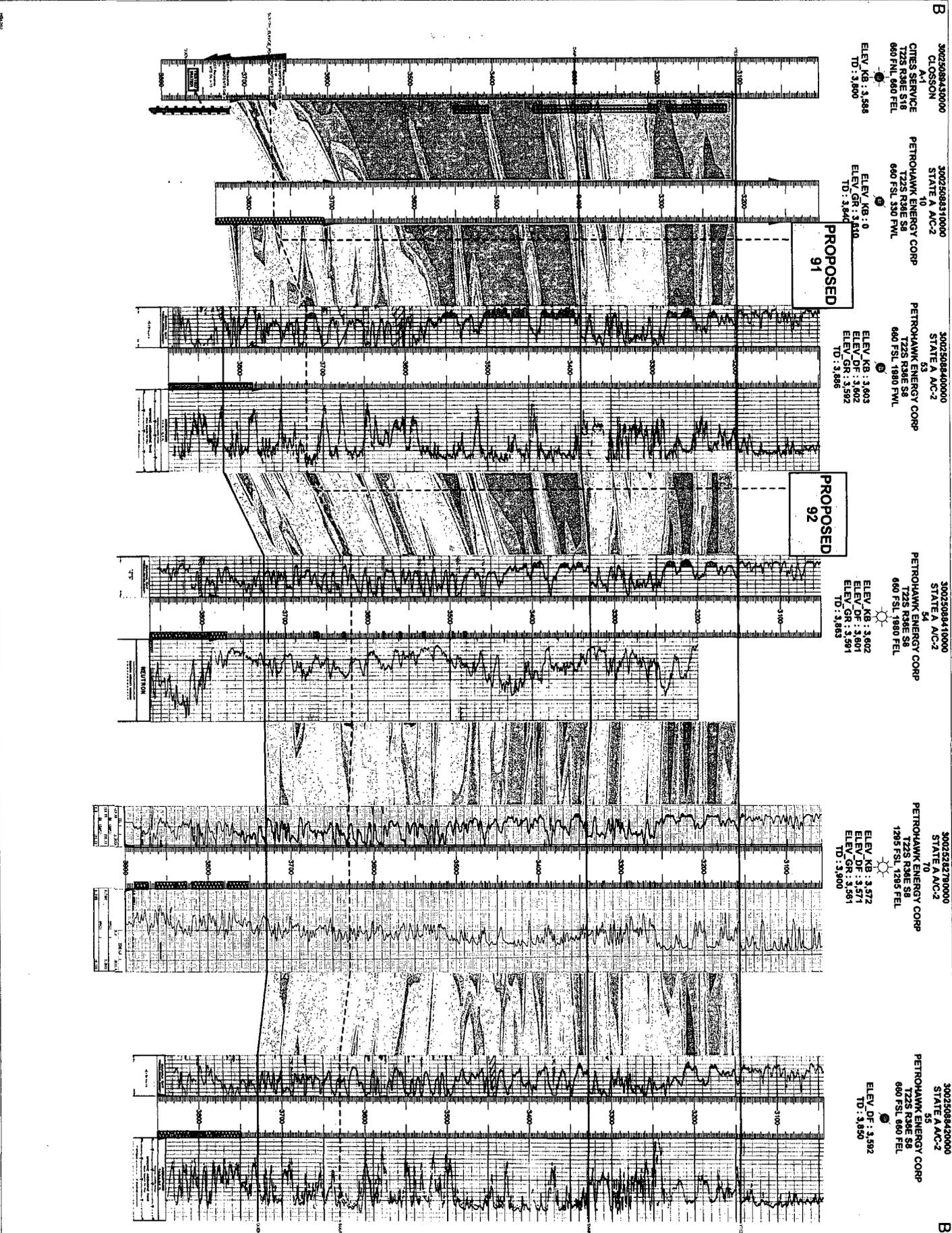


EXHIBIT 4

3002509270000  
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PETROHAWK ENERGY CORP  
1735 R34E S9  
1800 FNL 990 FWL  
ELEV. DB : 3.474  
TD : 3.760

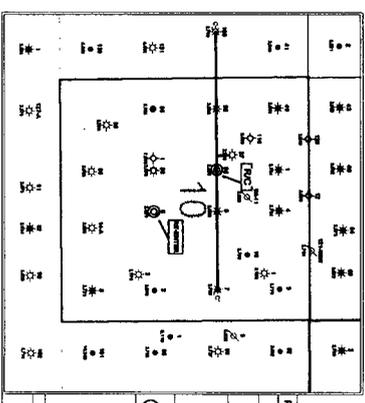
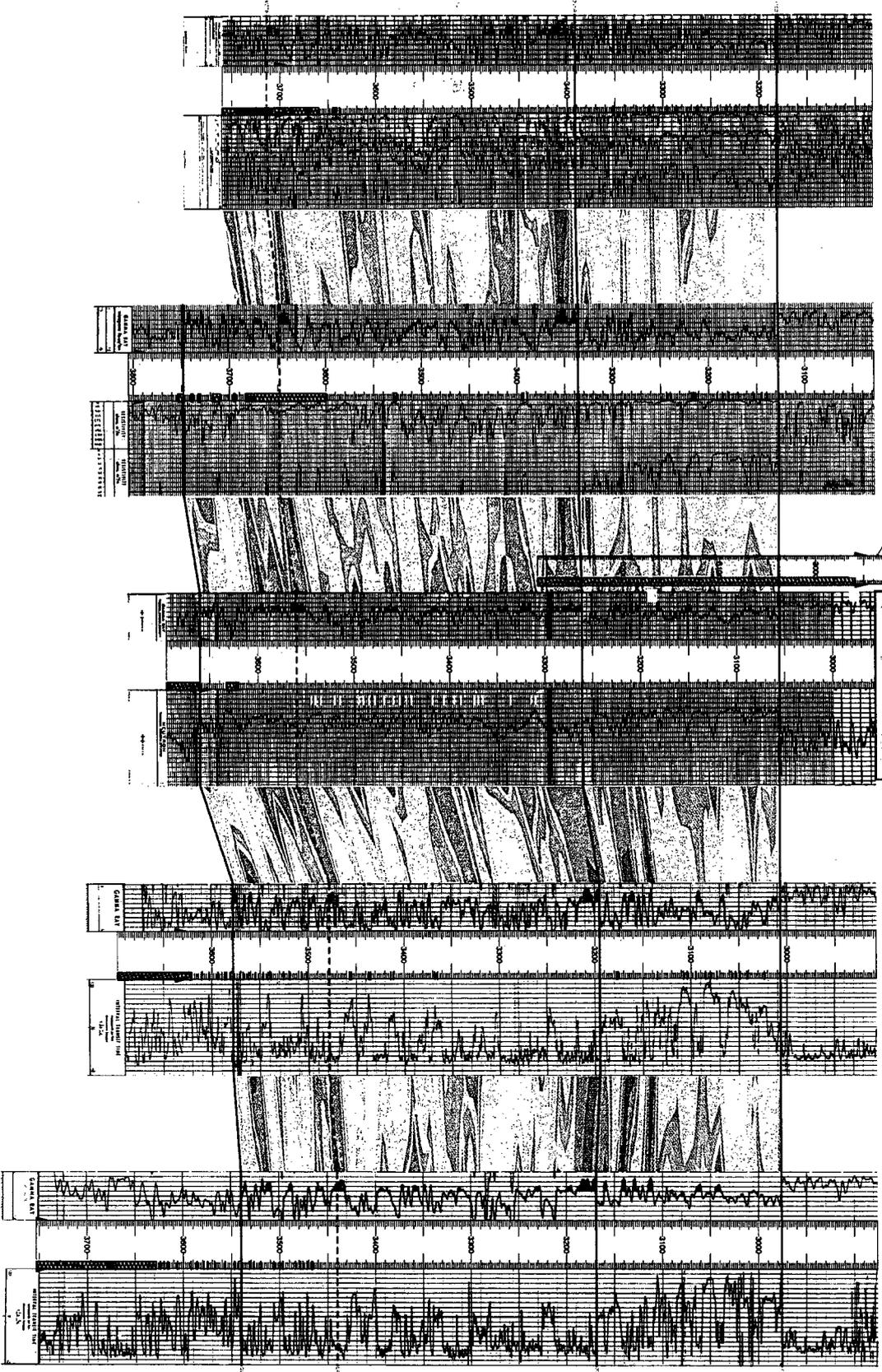
3002509290000  
STATE A AC-1  
PETROHAWK ENERGY CORP  
1735 R34E S10  
1800 FNL 660 FWL  
ELEV. DB : 3.485  
TD : 3.805

PROJECTED TO 2 SECTION  
3002509300000  
STATE A AC-1  
PETROHAWK ENERGY CORP  
1735 R34E S10  
1800 FNL 990 FWL  
ELEV. DB : 3.474  
TD : 3.760

30025093040000  
STATE A AC-1  
PETROHAWK ENERGY CORP  
1735 R34E S10  
1800 FNL 1980 FWL  
ELEV. DB : 3.470  
TD : 3.695

30025093030000  
STATE A AC-3  
PETROHAWK ENERGY CORP  
1735 R34E S10  
1800 FNL 2310 FWL  
ELEV. DB : 3.471  
ELEV. CR : 3.461  
TD : 3.698

30025093040000  
STATE A AC-3  
PETROHAWK ENERGY CORP  
1735 R34E S10  
1800 FNL 660 FWL  
ELEV. DB : 3.479  
TD : 3.753



PETROHAWK ENERGY CORP  
LEA JALMAT SOUTH AREA  
1735 R34E S10  
1800 FNL 990 FWL  
ELEV. DB : 3.474  
TD : 3.760

PETROHAWK ENERGY CORPORATION  
JALMAT SOUTH AREA  
CROSS SECTION MAP  
LEA COUNTY, NEW MEXICO  
PORTED WELL DATA  
Well Number  
Well Depth  
Well Status

PETROHAWK ENERGY CORPORATION  
JALMAT SOUTH AREA  
TOP VARIED DEPTH STRUCTURE MAP  
LEA COUNTY, NEW MEXICO  
PORTED WELL DATA  
Well Number  
Well Depth  
Well Status

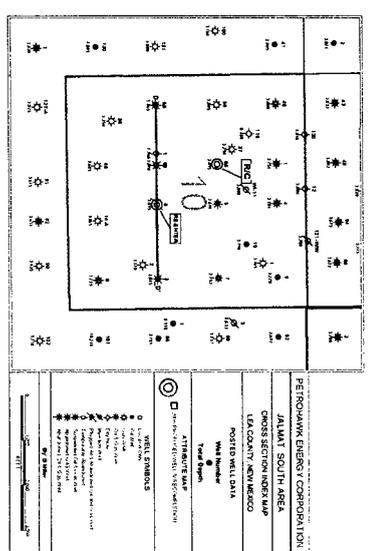
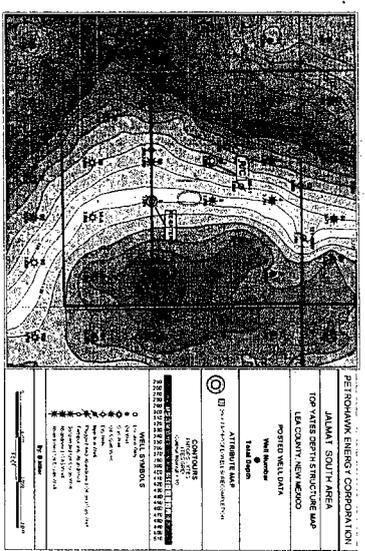
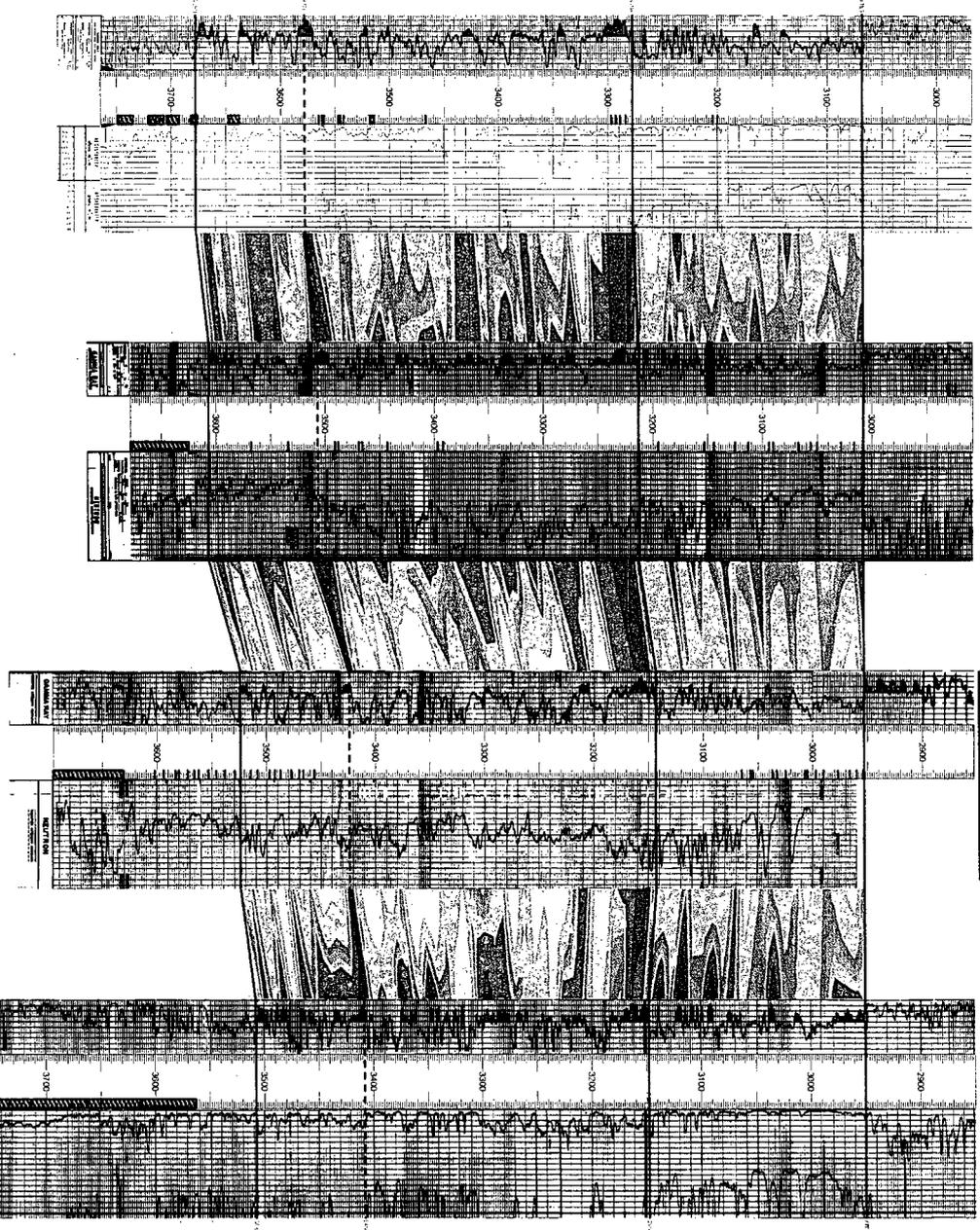
D 3002509294000  
STATE A AC-1  
56  
PETROHAWK ENERGY CORP  
1725 RISE S/D  
1980 FEL 680 FVL  
ELEV. KB : 3,448  
ID : 3,765

3002509297000  
STATE A AC-1  
88  
PETROHAWK ENERGY CORP  
1725 RISE S/D  
1980 FEL 680 FVL  
ELEV. OF : 3,452  
ID : 3,678

3002509202000  
STATE A AC-3  
6  
PETROHAWK ENERGY CORP  
1980 FEL 2310 FEL  
ELEV. OF : 3,446  
ID : 3,895

3002509301000  
STATE A AC-3  
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PETROHAWK ENERGY CORP  
1725 RISE S/D  
1980 FEL 680 FVL  
ELEV. KB : 3,468  
ID : 3,843

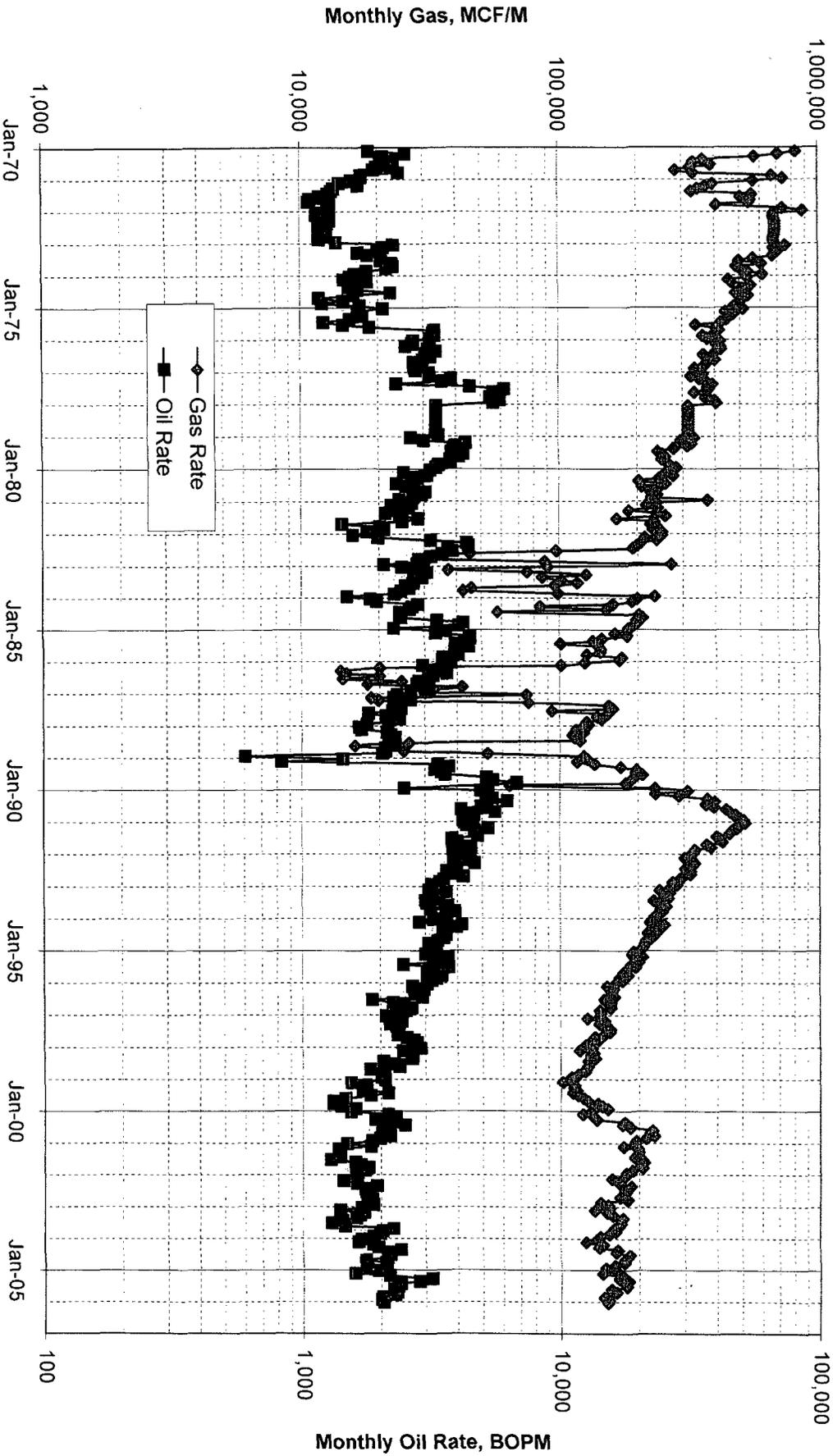
**RE-ENTER**



PETROHAWK ENERGY CORP  
1725 RISE S/D  
1980 FEL 680 FVL  
ELEV. KB : 3,448  
ID : 3,765



Petrohawk Leases  
Jalmat Field  
Lea County, New Mexico



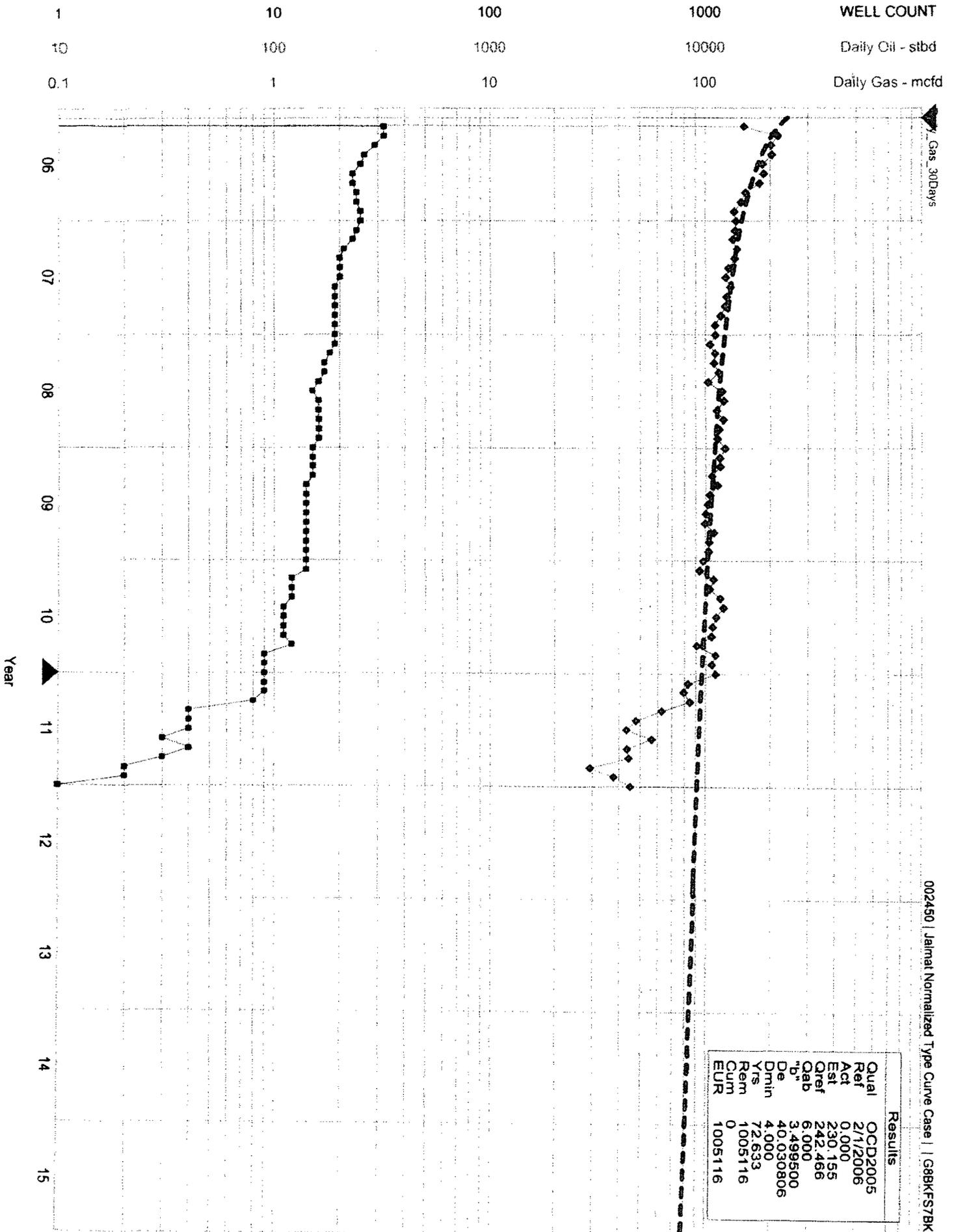


EXHIBIT 9

**Jalmat Field - New Compls since Mission / Petrohawk became operator in 3/2004**

Lease Name	Well	Location	Apl	Type	Oil or Gas	Field Name	Status	First Prod Date	Prod Zone Name	8/8ths Initial Rate		
										Oil (stbd)	Gas (mcf/d)	Wtr (stbd)
MATKINS	2	151 23S 36E	30-025-10720	Add pay & Frac	Gas	JALMAT	Producing	2005/03	TANSILL-YATES-SEVEN RIVERS	0	34	2
STATE AAC1	57	13B 23S 36E	30-025-09344	Add pay & Frac	Gas	JALMAT	Producing	2005/03	TANSILL-YATES-SEVEN RIVERS	0	81	0
STATE AAC1	59	15E 23S 36E	30-025-10725	Add pay & Frac	Gas	JALMAT	Producing	2005/03	TANSILL-YATES-SEVEN RIVERS	0	39	2
STATE AAC1	65	23D 23S 36E	30-025-09394	Add pay & Frac	Gas	JALMAT	Producing	2005/02	TANSILL-YATES-SEVEN RIVERS	0	172	6
STATE AAC1	66	13D 23S 36E	30-025-09346	Add pay & Frac	Gas	JALMAT	Producing	2005/04	TANSILL-YATES-SEVEN RIVERS	0	94	0
STATE AAC1	69	3P 23S 36E	30-025-09229	Add pay & Frac	Gas	JALMAT	Producing	2005/03	TANSILL-YATES-SEVEN RIVERS	0	158	0
STATE AAC1	71	13M 23S 36E	30-025-09347	Add pay & Frac	Gas	JALMAT	Producing	2005/01	TANSILL-YATES-SEVEN RIVERS	0	205	1
STATE AAC1	82	15B 23S 36E	30-025-10723	Add pay & Frac	Gas	JALMAT	Producing	2005/01	TANSILL-YATES-SEVEN RIVERS	0	305	0
STATE AAC1	84	23G 23S 36E	30-025-09397	Add pay & Frac	Gas	JALMAT	Producing	2005/04	TANSILL-YATES-SEVEN RIVERS	0	176	0
STATE AAC1	89	10N 23S 36E	30-025-09298	Add pay & Frac	Gas	JALMAT	Producing	2005/03	TANSILL-YATES-SEVEN RIVERS	0	8	35
STATE AAC1	94	22C 23S 36E	30-025-09384	Add pay & Frac	Gas	JALMAT	Shut In	2005/03	TANSILL-YATES-SEVEN RIVERS	1	132	36
STATE AAC2	1	9N 22S 36E	30-025-08792	Add pay & Frac	Gas	JALMAT	Producing	2005/03	TANSILL-YATES-SEVEN RIVERS	0	68	0
STATE AAC2	28	5I 22S 36E	30-025-08792	Add pay & Frac	Oil	JALMAT	Producing	2004/06	TANSILL-YATES-SEVEN RIVERS	1	324	1
STATE AAC2	29	9D 22S 36E	30-025-08854	Add pay & Frac	Gas	JALMAT	Producing	2005/05	TANSILL-YATES-SEVEN RIVERS	0	162	0
STATE AAC2	33	5O 22S 36E	30-025-08793	Add pay & Frac	Gas	JALMAT	Producing	2004/05	TANSILL-YATES-SEVEN RIVERS	1	266	6
STATE AAC2	38	9K 22S 36E	30-025-08847	Add pay & Frac	Gas	JALMAT	Producing	2004/07	TANSILL-YATES-SEVEN RIVERS	0	119	0
STATE AAC2	47	5C 22S 36E	30-025-08798	Add pay & Frac	Oil	JALMAT	Producing	2005/04	TANSILL-YATES-SEVEN RIVERS	28	137	0
STATE AAC2	67	9K 22S 36E	30-025-28276	Add pay & Frac	Gas	JALMAT	Producing	2005/03	TANSILL-YATES-SEVEN RIVERS	0	70	0
STATE AAC2	70	8P 22S 36E	30-025-28279	Add pay & Frac	Gas	JALMAT	Producing	2004/08	TANSILL-YATES-SEVEN RIVERS	0	223	85
STATE AAC2	81	5K 22S 36E	30-025-35868	New Drill	Gas	JALMAT	Producing	2004/04	TANSILL-YATES-SEVEN RIVERS	2	247	4
STATE AAC2	82	11J 22S 36E	30-025-36936	New Drill	Gas	JALMAT	Producing	2005/05	TANSILL-YATES-SEVEN RIVERS	0	136	0
STATE AAC2	83	11N 22S 36E	30-025-36936	New Drill	Gas	JALMAT	Producing	2005/05	TANSILL-YATES-SEVEN RIVERS	0	70	0
STATE AAC2	84	11O 22S 36E	30-025-36935	New Drill	Gas	JALMAT	Producing	2005/04	TANSILL-YATES-SEVEN RIVERS	0	100	0
STATE AAC2	85	11A 22S 36E	30-025-37663	New Drill	Gas	JALMAT	WO Compl	2006/04	TANSILL-YATES-SEVEN RIVERS	0	243	0
STATE AAC2	86	11G 22S 36E	30-025-37664	New Drill	Gas	JALMAT	Producing	2006/04	TANSILL-YATES-SEVEN RIVERS	0	Cleaning up after frac	0
STATE AAC2	87	11H 22S 36E	30-025-37665	New Drill	Gas	JALMAT	WO Compl	2006/04	TANSILL-YATES-SEVEN RIVERS	0	316	0
STATE AAC2	88	11I 22S 36E	30-025-37666	New Drill	Gas	JALMAT	Producing	2006/04	TANSILL-YATES-SEVEN RIVERS	0	0	0
STATE AAC3	5	10G 23S 36E	30-025-09303	Add pay & Frac	Gas	JALMAT	Shut In	2005/03	TANSILL-YATES-SEVEN RIVERS	0	0	25
STATE 157 G	5	5H 22S 36E	30-025-37801	New Drill	Gas	JALMAT	WO Compl	WO Compl	TANSILL-YATES-SEVEN RIVERS	0	WO Compl	0

Avg Initial Rate:

149

OFFSET JALMAT WELLS FOR PROPOSED NEW WELL (RECOMPLETE OF ACC 1 #86)  
 SECTION: 10 SPOT: F 123S R38E  
 JALMAT FIELD, LEA CO, NM

Well #	Sec/spot	Comp date	Zones	Pay Interval	Treatment	Cum MMCF	Y-7R	Cur rate	Y-7R	Status	EUR
40-acre offsets, Sec 10:											
ACC1 #81	10C	Jan-60	Queen	3654-3780	10K# SD	0	0	0	0	T&A 9/99	0
		Sep-99	Y-7R	3083-3279	183K# SD	58	24	24	Active		118
ACC1 #49	10D	Mar-59	Queen	3690-3766	50K# SD	0	0	0	0	T&A 2/89	0
		Feb-89	Y-7R	3159-3638	185K# SD	346	2	2	Active		346
ACC1 #116	10D	Jan-84	Queen	3666-3842	7200 gal acid	0	0	0	0	T&A 10/92	0
ACC1 #55	10E	Mar-59	Queen	3678-3754	50K# SD	0	0	0	0	T&A 9/90	0
		Aug-90	Y-7R	3140-3530	90K# SD	185	2	2	Active		185
ACC1 #37	10F	Feb-53	Y	2959-3224	Natural	4088	1	1	Active		4088
AA1 #86	10F	Apr-60	Queen	3660-3696	10 K# SD	0	0	0	0	T&A 12/93	0
			/R	Proposed Recompletion		0	0	0	0		704
ACC3 #5	10G	May-60	Queen	3502-3698	10K# SD	0	0	0	0	T & A 9/90	0
		Sep-90	Y-7R	3024-3457	74 K# SD	78	0	0	SI		78
		Mar-05	Y-7R	2941-3326	282 K# SD	0	0	0	SI		0
ACC3 #11	10G	May-84	Queen	3642-3754	5500 gal acid	0	0	0	0	T&A 10/92	0
ACC3 #4	10J	Feb-60	Queen	3677-3729	36K# SD	0	0	0	0	T&A 12/90	0
		Dec-90	Y-7R	3059-3503	160K# SD	167	0	0	SI		167
ACC3 #6	10J	Aug-60	Queen	3456-3602	40K# SD	0	0	0	0	P&A 12/94	0
		Oct-90	Y	2954-3065	219K# SD	0	0	0	0	P&A 12/94	0
			/R	To be re-entered		0	0	0	0		704
ACC1 #88	10K	May-60	Queen	3625-78	10K# SD	0	0	0	0	T&A 3/89	0
		Mar-89	Y-7R	3016-3568	156 K# SD	0	0	0	0	SI	0
Gazelle #1	10K	Mar-98	Abo	None	None	0	0	0	0	P&A 8/98	0
ACC1 #56	10L	May-59	Queen	3638-3721	50K# SD	0	0	0	0	P&A 9/92	0
		Mar-89	Y-7R	3284-3565	None	0	0	0	0	P&A 9/92	0

## Jalmat - New Drill & Recomplete - Economics Summary Table

### Input:

WI = 100 %	RI = 82.5%	
Prod Start Date = Drill Date + 1 mth		
Initial Rate = 149 mcf + 0 boppd		(from avg of Mission/Petrohawk activity)
di = 40%		(from normalized type curve)
n = 3.5		(from normalized type curve)
NGL Yield = 136 bbls/mmcft		(from plant statements)
1-Gas Shrinkage = 59%		(from plant statements)
Plant Takes = 13% of residue gas & ngl		(contract with plant)
Gas Price = \$6.00/mcf flat		
Oil Price = \$60/stb flat		(no oil in economics)
NGL Price = \$42.60/stb flat		(71% of Oil)
OP Cost = \$1264/well/mth		(actuals from los statement)
CWC = 650 M\$ (New Drill)	CWC = 425 M\$ (Recomplete)	

### Results:

	<u>New Drill</u>	<u>Recompl</u>
8/8ths Reserves:	704 MMCFG	704 MMCFG
NPV @ 10%:	821 M\$	1039 M\$
ROR:	36%	65%
Payout:	40 mths	26 mths
ROI:	6.1	9.3

**EXHIBIT 13**

**Affected Parties**

**State A A/C 1 Well No. 86  
Section 10, Township 23 South, Range 36 East, NMPM  
Lea County, New Mexico.**

Arch Petroleum  
10 Desta Dr. Suite 420E  
Midland, TX 79705

PROPOSED WELLS IN SECTION 10-23S-36E

4

3

2

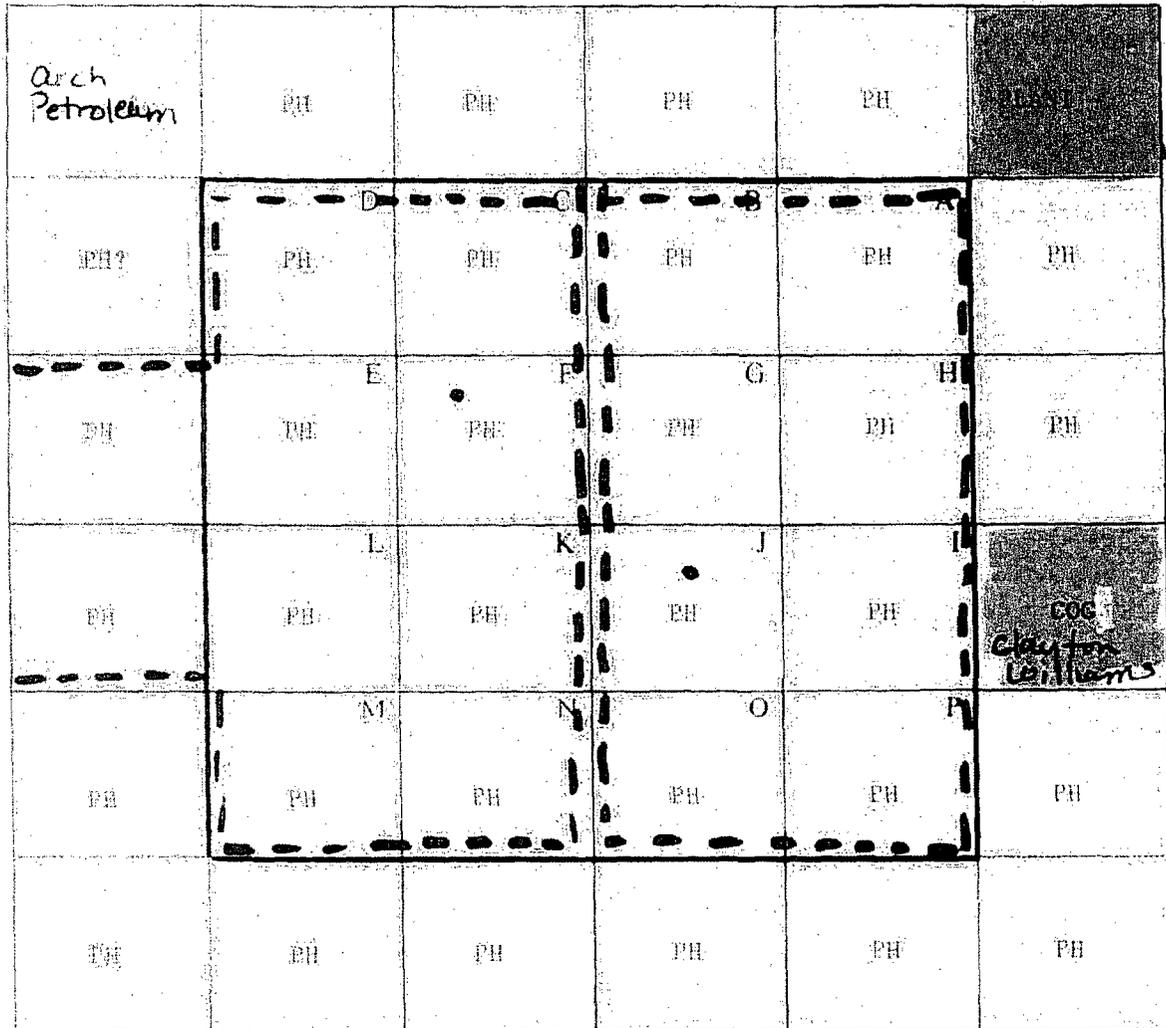
9

11

16

15

14



PH = Petrohawk  
 PLANT = Plantation



DISTRICT I

1825 N. French Dr., Hobbs, NM 88240

DISTRICT II

1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

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

State of New Mexico

Energy, Minerals & Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
1220 South St. Frances Dr.  
Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-09296	Pool Code 79240	Pool Name JALMAT; TANSILL-YATES-7 RIVERS (GAS)
Property Code 33493	Property Name STATE A A/C1	Well Number 086
OGRD No. 148381	Operator Name PETROHAWK OPERATING COMPANY	Elevation 3460'

Surface Location

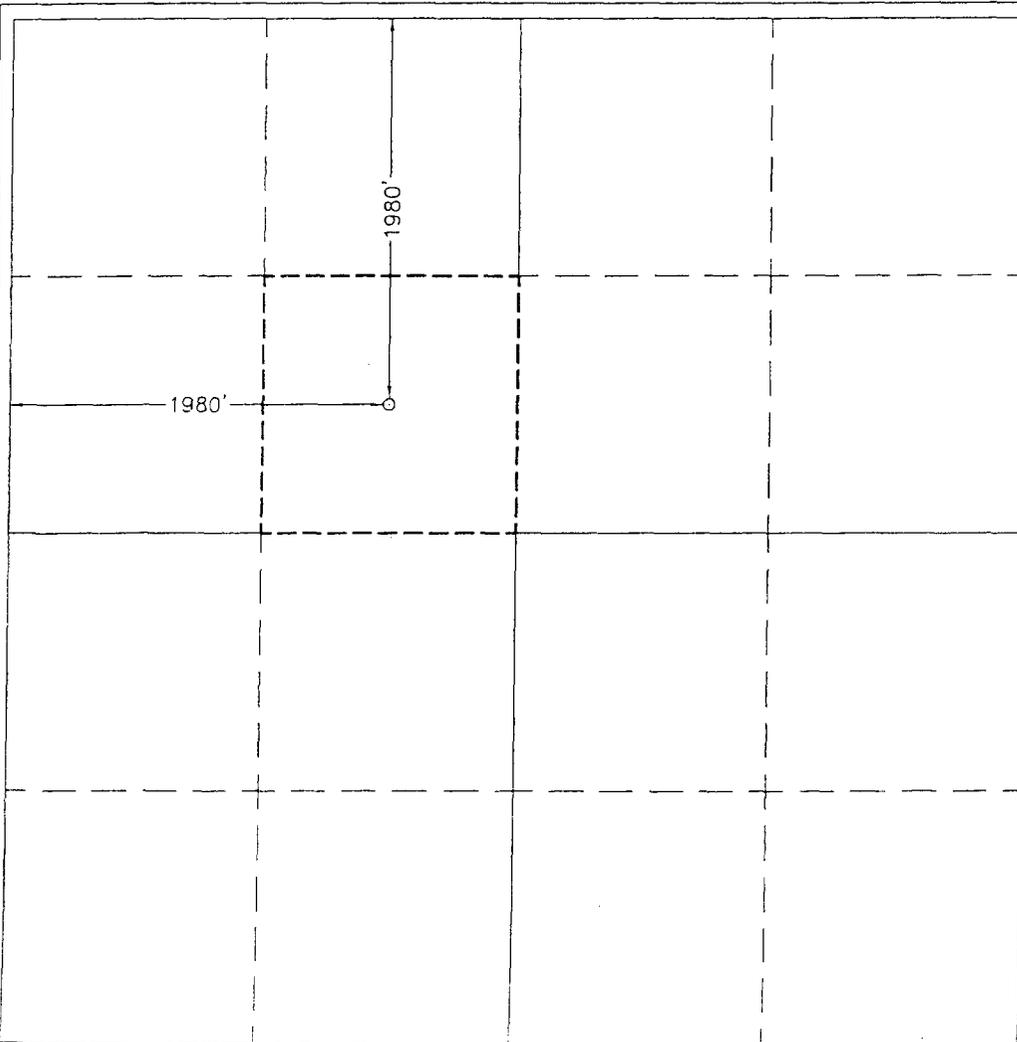
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	10	23 S	36 E		1980	NORTH	1980	WEST	LEA

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
SAME									

Dedicated Acres 640	Joint or Infill 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



**OPERATOR CERTIFICATION**  
I hereby certify the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Nancy K. Gatti* 6-15-06  
Signature Date  
**NANCY K. GATTI**  
Printed Name  
**REGULATORY MANAGER**

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**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.

Date of Survey  
Signature & Seal of Professional Surveyor

**EXHIBIT 16**

Certificate No.