

8/11/08 DATE IN	SUSPENSE	Brooks ENGINEER	8/11/08 LOGGED IN	NSL TYPE	PKUR0822457432 APP NO.
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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



Apache Corp.
JR Phillips #11

ADMINISTRATIVE APPLICATION CHECKLIST

5914

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
P.O. Box 1056
Santa Fe, New Mexico 87504

Signature

Attorney for Applicant
Title Date

jamesbruc@aol.com
e-mail Address

Date

RECEIVED
2008 AUG 11 PM 1:48

8/11/08

JAMES BRUCE
ATTORNEY AT LAW

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jamesbruc@aol.com

August 11, 2008

Hand Delivered

Mark E. Fesmire, P.E.
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>	J.R. Phillips Well No. 11
<u>Well Location:</u>	1310 feet FNL & 1310 FEL
<u>Well Unit:</u>	NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 1, Township 20 South, Range 36 East, N.M.P.M., Lea County, New Mexico

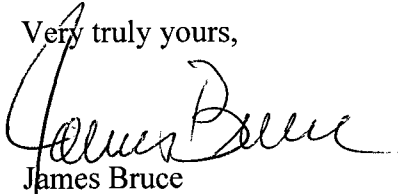
The well will test the Monument-Paddock, Monument-Blinbry, and Monument-Tubb Pools. The pools are developed on statewide rules, with 40 acre spacing, and wells to be located no closer than 330 feet to a quarter-quarter section line.

The application is based on geologic and engineering reasons. A complete discussion, with exhibits, is attached as Exhibit A. The well is located equidistant from several existing wells. The well data shows that existing wells drain less than 40 acres. Therefore, the proposed location will recover undrained reserves.

Exhibit B is a land plat. The J.R. Phillips (fee) Lease, which has common ownership, covers the NE $\frac{1}{4}$ of Section 1. 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,

A handwritten signature in cursive script, appearing to read "James Bruce". The signature is written in dark ink and is positioned above the printed name.

James Bruce

Attorney for Apache Corporation

**Application of Apache Corporation
for Administrative Approval of an Unorthodox Well Location**

40 acres – 1310' FNL & 1310' FEL
Section 1, Township 20 South, Range 36 East, NMPM
Lea County, New Mexico

PRIMARY OBJECTIVES: Paddock, Blinebry, Abo

In support:

1. Apache Corporation is the operator of the proposed J.R. Phillips #10 well (**Exhibit 1**).
2. The pool rules that apply to the proposed location are the Monument; Paddock, the Monument; Blinebry, and the Monument; Abo pools. The proposed unorthodox location encroaches on spacing units B, G, and H. The working and royalty interests are common in all four spacing units (**Exhibit 2**). The production values posted in **Exhibit 2**, **Exhibit 3**, and **Exhibit 4** represent cumulative Paddock, Blinebry, and Abo production respectively. The operator's working interest is 100% in all zones and all four offset proration units.

EXHIBIT

1

3. The proposed **J.R. Phillips #10** location is necessitated by access to the largest undrained area common to all offset proration units.

a. Geology

The Paddock, Blinebry, and Abo are members of the Permian Leonardian aged carbonates of the central basin platform. The formations are a shallow marine carbonate consisting primarily of dolomite. Anhydrite can occur throughout the interval. Porosity and permeability are low. Wells are not generally capable of drainage of a full 40 acre spacing unit.

API					Cum Through 03/2008	Daily
30025	Op.	Well	Location	Pool	O/G/W (mbo/mmcf/mbw)	O/G/W (bopd/mcf/tpd/bwpd)
04134	Apache	J.R. Phillips 5	660'FNL 660'FEL	Monument; Paddock, Monument; Abo	204.7/0/0 15.3/0.130/6.1	NA 4/3/1
04135	Apache	J.R. Phillips 6	751'FNL 1909' FEL	Monument; Paddock	331.0/0.319/1745.1	37.4/201.6/558.6
04138	Apache	J.R. Phillips 9	660' FNL 360' FEL	Monument; Paddock, Monument; Blinebry, Eunice Monument; Grayburg- San Andres	112.5/0.143/388.1 3.1/0/0 27.4/0.026/9.1	39/155/0 NA NA
04136	Apache	Phillips 7	1980' FEL 760' FNL	Monument; Paddock, Monument; Abo	141.2/0.024/106.3 60.8/0.130/9.1	NA

One modern log, (Skelley "D" State 5 Sec 11) within section 1, was used to analyze pay throughout the Paddock interval. A structural map of the Paddock can be seen in **Exhibit 5**. Paddock economics justify completion of the J.R. Phillips #10 in not only the Paddock but the Blinebry and Abo as well. Due to the lack of modern logs through the Blinebry and Abo intervals, the given pay is unknown. This also leads to inconclusive drainage studies from these zones in offset wells. However, significant upside exists in completing the Blinebry and Abo

based upon production from these zones from other wells in the surrounding area.

1. Net Pay through the Paddock was read from a modern neutron-density log where cross-plotted porosity (XPOR) using a minimum of 5% and a maximum of 30%. Additionally, gamma ray (40 APIU in the Paddock) and water saturation (10%-50%, using a standard equation with $a=1$ and $m=n=2$) cutoffs were also employed.
2. Average porosity and water saturation was calculated for intervals meeting those criteria and was found to be 9.4% and 34% respectively.
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 offset modern wells, many had to be excluded from analysis because of the vintage or type of porosity logs. This procedure has proved successful for Apache in recent drilling in this area.

b. Drainage

The following table calculates drainage areas based upon log interpretation of the Skelley "D" State 5 and forecasted estimated ultimate recovery of offset Paddock producing wells affected by the proposed J.R. Phillips #10.

Operator	Well	Location	Reservoir	H Ft	Area A	EUR MBO	EUR MMCFG
Apache	JR Phillips 5	660' FNL 660' FEL	Paddock	95	14.8	204.7	0.0
Apache	JR Phillips 6	751' FNL 1909' FEL	Paddock	95	34.7	480.0	1.12
Apache	JR Phillips 9	660' FNL 360' FEL	Paddock	95	8.1	112.5	0.143
Apache	Phillips 7	1980' FEL 760' FNL	Paddock	95	10.2	141.2	.025

Reserves for the proposed location were calculated by determining a field wide recovery factor based upon virgin Gas/Oil ratio (GOR) and cumulative GOR. Total net pay was 95 ft and was utilized in volumetric calculations. Drainage area was calculated by averaging field wide drainage areas and accounting for competitive drainage between offset producers. The reserves are as follows:

				H	Area	EUR	EUR
Operator	Well	Location	Reservoir	Ft	A	MBO	MMCFG
Apache	J.R. Phillips #10	1310' FNL 1310' FWL	Paddock	95	10	138	0.322

4. Notice the J.R. Phillips #10 encroaches the spacing within the proration unit of each of the aforementioned offset wells—each of which having produced from at least one of the proposed reservoirs being requested for development in the J.R. Phillips #10.
5. Approval of this application will afford interest owners in these spacing units opportunity to recover oil and gas which would not otherwise be recovered and to do so without violating correlative rights.
6. The unorthodox location does not encroach on other parties outside of Apache corporation, therefore no party notification is required.

NE 1/4 Section 1 TWN 20S RNG 36E

PHILLIPS JR 1



PHILLIPS JR 9



PHILLIPS JR 5



PHILLIPS JR 9

JR PHILLIPS 9
112,542
143,242

JR PHILLIPS 5
204,720

PHILLIPS 4 PHILLIPS JR 4



JR PHILLIPS 6
331,050
318,885

APA
W.I. 100%

PROP_PHILLIPS #10

PHILLIPS JR 7



PHILLIPS JRH 2



PHILLIPS 7

141,231
24,580

JR PHILLIPS UNIT 3

PHILLIPS JR GAS UN 3



JR PHILLIPS 8

JR PHILLIPS 8

JR PHILLIPS 8

APACHE CORPORATION

Exhibit 2 (Paddock Production Base Map)



POSTED WELL DATA

WELL LOG
FACILITY: Q-PADDOCK

ATTRIBUTE MAP

Zone: FMPROD - Q-PADDOCK IS PRESENT

WELL SYMBOLS

- Oil Well
- Gas Well
- Abandoned Oil Well
- Active Producer
- Pud Location

By Josh Hegg

August 5, 2008

NE 1/4 Section 1 TWN 20S RNG 36E

PHILLIPS JR 1
PHILLIPS 1

PHILLIPS JR 9
PHILLIPS JR 9
PHILLIPS JR 5
JR PHILLIPS 5
JR PHILLIPS 5
JR PHILLIPS 9

PHILLIPS 4 PHILLIPS JR 4
PHILLIPS JR 4
JR PHILLIPS 6

APA
W.I. 100%
PROP PHILLIPS #10

PHILLIPS JR 7
PHILLIPS 2
PHILLIPS JRH 2
PHILLIPS JR 7
PHILLIPS 7

JR PHILLIPS UNIT 3
PHILLIPS JR GAS UN 3
JR PHILLIPS 8
JR PHILLIPS 8
JR PHILLIPS 8

APACHE CORPORATION

Exhibit 3 (Blinebry Production Base Map)



POSTED WELL DATA

Well Used
1/20/02 1/2/06 BRY

ATTRIBUTE MAP
Zone FMPROD - O_BLINEBRY IS PRESENT

WELL SYMBOLS

- Oil Well
- Gas Well
- Abandoned Oil Well
- Active Producer
- Pud Location

By Josh Hegg

August 5, 2008

NE 1/4 Section 1 TWN 20S RNG 36E

PHILLIPS JR 1
PHILLIPS 1

PHILLIPS JR 9
PHILLIPS JR 5
JR PHILLIPS 5
130,310
130,026
JR PHILLIPS 9

PHILLIPS 4
PHILLIPS JR 4
JR PHILLIPS 6

APA
W.I. 100%
PROP_PHILLIPS #10

PHILLIPS JR 7
PHILLIPS 2
PHILLIPS JRH 2
PHILLIPS JR 7
129,769
129,550
PHILLIPS 7

JR PHILLIPS UNIT 3
PHILLIPS JR GAS UN 3
JR PHILLIPS 8
JR PHILLIPS 8
JR PHILLIPS 8

APACHE CORPORATION

Exhibit 4 (Abo Production Base Map)



POSTED WELL DATA

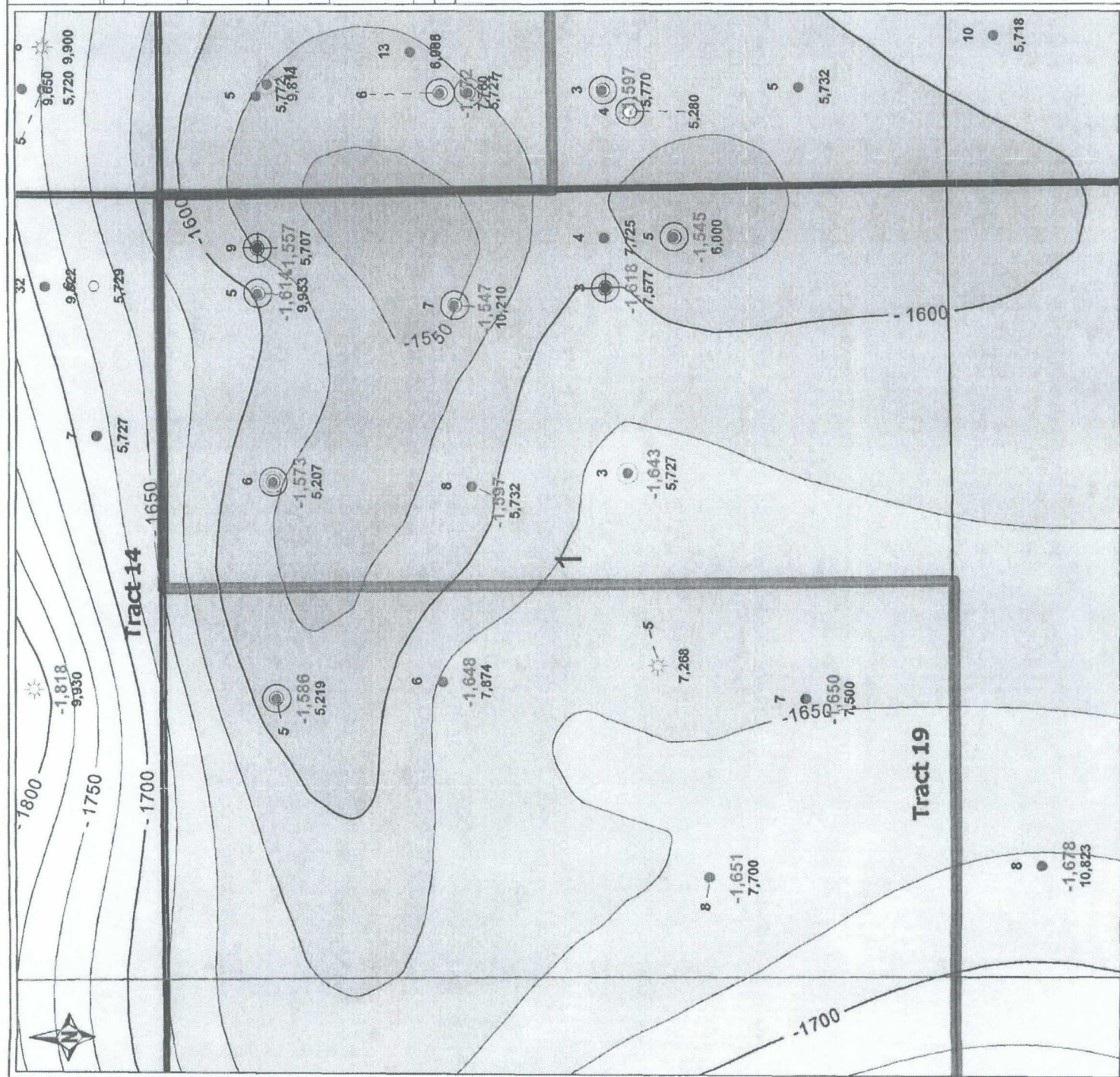
Well-Prod
100% 5 ABO

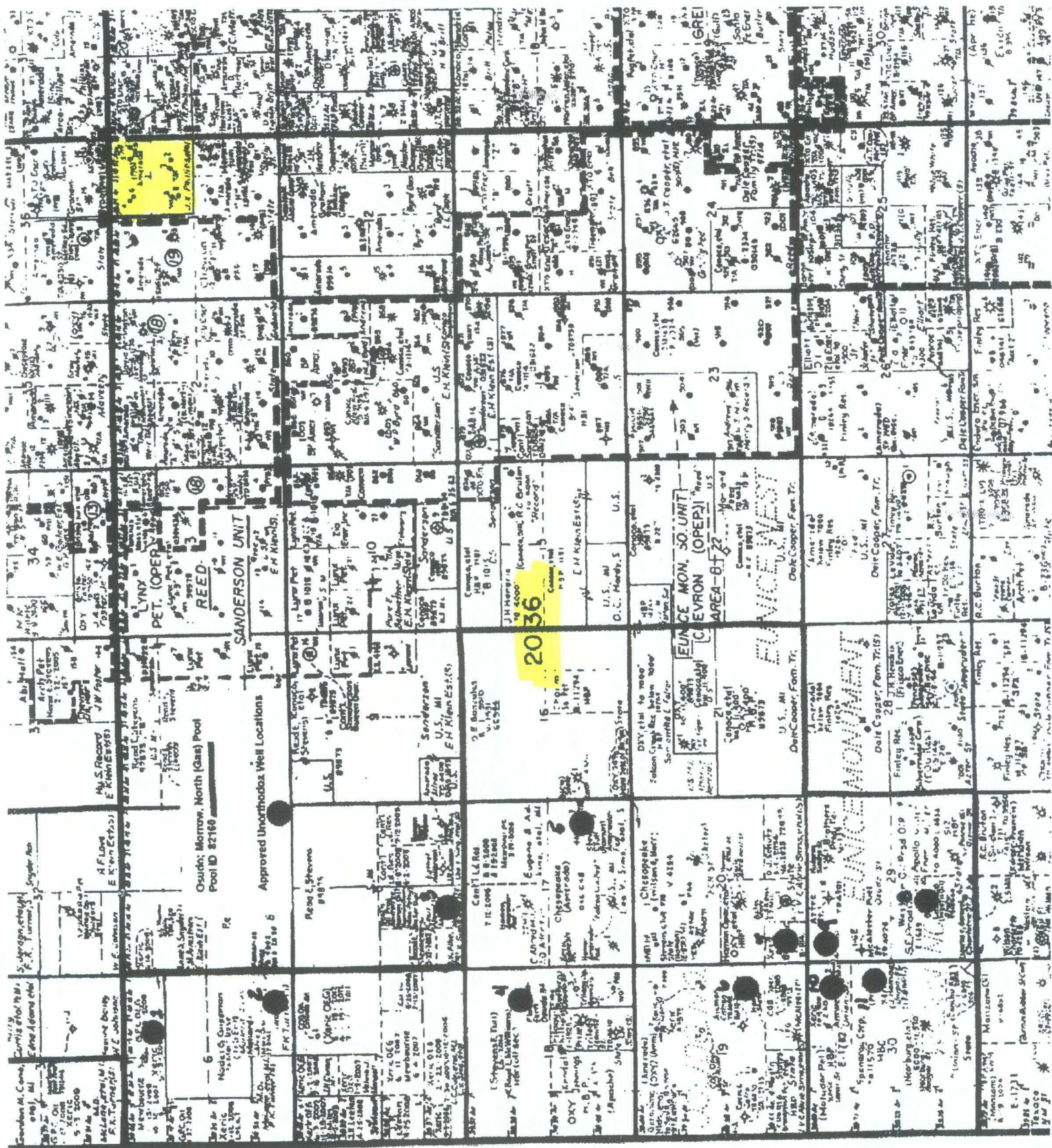
ATTRIBUTE MAP
Zone FIPROD - Q_ABO IS PRESENT

WELL SYMBOLS

- Oil Well
- Gas Well
- Abandoned Oil Well
- Active Producer
- Prod Location

By: Josh Hegg
August 5, 2008





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EXHIBIT

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