## STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF YATES PETROLEUM CORPORATION FOR APPROVAL OF A UNIT AGREEMENT, LEA COUNTY, NEW MEXICO.

**CASE NO. 13514** 

## **AFFIDAVIT OF JOHN AMIET**

STATE OF NEW MEXICO)
) ss.
COUNTY OF EDDY
)

- I, John Amiet, being first duly sworn on oath, states as follows:
- 1. My name is John Amiet. I reside in Artesia, New Mexico. I am the petroleum geologist employed by Yates Petroleum Corporation ("Yates") who is responsible for the formation of the proposed Wynona State Exploratory Unit ("the Unit") comprised of 2633.64 acres, more or less, of State of New Mexico lands situated in Lea County, New Mexico. The horizontal limits of said Unit Area are described as follows:

## Township 12 South, Range 34 East, N.M.P.M.

Section 19: N2

Section 20: N2, SE4

Section 21: All Section 22: All

Section 28: N2, N2 S2, S2 SE4

- 2. Yates, the designated Unit Operator in the Wynona State Exploratory Unit Agreement, proposes the formation of the Unit to test all formations from the surface to the base of the Mississippian formation.
- 3. The initial unit well will be drilled at a standard location 900 feet from the North line and 660 feet from the East line of Section 20, Township 12 South, Range 34 East, NMPM, Lea County, New Mexico to an approximate depth of 12,450 feet. The estimated costs for this well are \$1,879,500 million. (The AFE is attached as <u>Yates Exhibit 2</u>).

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Case No. 13514 Exhibit No. 1

Submitted by:

Yates Petroleum Corporation

Hearing Date: June 30, 2005

- 4. Attachment A to the Affidavit is a copy of the Unit Agreement for the proposed Wynona State Exploratory Unit. This agreement is on the New Mexico State Land Office State/Fee Unit Agreement form.
- 5. Attachment B to the Affidavit is the plat to the Unit Agreement that shows the boundaries of the Wynona State Exploratory Unit and the location of the initial unit test well.
- 6. Attachment C to this Affidavit is a copy of Schedule B to the Unit Agreement for the Wynona State Exploratory Unit that identifies the working interest ownership in the unit area. 75% percent of the working interest in the Unit Area is owned by Yates and its affiliated companies and is committed to the Unit.
- 7. The schedule under Attachment C to the Affidavit also identifies the royalty interest in the Unit Area. 100% percent of the royalty interest is owned by the State of New Mexico. Attachment D to this Affidavit is a letter from the New Mexico Commissioner of Public Lands giving preliminary approval of the State Land Office to the proposed Wynona State Exploratory Unit. There are no overriding royalty interests in the Unit Area.
  - 8. All of Yates' interest in the Unit Area have been committed to the Unit.
- 9. Attachment E to this affidavit is a Basal Morrow Sand Isopach Map. Yates is attempting to locate channel sands by utilizing 3-D seismic, log correlation, and regional mapping. Although these gas sands can be very productive, the channels are very narrow and limited in aerial extent. These distributary sand channels are shown on the map. The primary Morrow channel system trends northeast to southwest across the northwest corner of the map. The Lacy J #2 and the Lacy J #4 both found productive sands in this northeast to southwest trending channel. The 3-D seismic interpretation is shown on the map and shows a northwest-southeast oriented channel coming off the main channel trend in the northwest corner of the map. The seismic cannot distinguish a 10' to 20' sand, but the downcutting into the underlying limestone can be detected. The proposed well location will once again test the northwest-southeast trending channel and determine whether it is a totally clay-filled channel or if there are also zones with gas productive sands.
- 10. There have been five wells drilled inside the proposed Unit area and there was only one very poor well. This well is located in the southeast corner of Section 22 and made only 1,906 BO. There has been one deep Atoka-Morrow penetration (in Section 28) inside the proposed unit, and it was a dry hole. The Range Lake Field lies on an uplifted fault block immediately to the southeast. There are numerous Devonian and upper Pennsylvanian wells on this structure, while the Wynona Unit lies in a structurally low area. The productive wells located in the southwest corner of the map are in the Hightower East Field and produce from the upper Pennsylvanian. Production in this field is erratic and ranges from very poor to 233 MBO per well.

- Attachment F is Cross Section A-A' and shows a thin basal Morrow sand (shown in orange) on the Lacy J #2 log. The total Morrow section is thicker in the Lacy J #2 due to a pre-existing structural low and the downcutting of the channel system. The Lacy J #2 is an excellent well which currently has a cumulative production of 600 MMCFG and 23 MBO in 5 months. The Lacy J #1 (in Section 8) was drilled in this secondary channel. This well shows only a slightly thinner Morrow section, nut no basal sand. Technically, the Lacy J #1 was a failure since the Morrow sand was absent. but an unexpected Middle Atoka sand has made a good well.
- 12. The unit covers an area that can be reasonably developed under a unit plan.
- The primary target is the Atoka-Morrow formation with Austin (upper 13. Mississippian) and upper Pennsylvanian production possible.
- If the initial unit well is successful, additional wells will be drilled in the 14 Accordingly, approval of the unit agreement will result in the efficient Unit Area. recovery of hydrocarbons.
- Approval of the Wynona State Exploratory Unit and the development of the Unit Area pursuant to a unit plan is in the best interest of conservation, the prevention of waste and the protection of correlative rights.

FURTHER AFFIANT SAYETH NOT.

SUBSCRIBED AND SWORN before me on this conday of June, 2005.

OFFICIAL SEAL My commission emisse

My Commission Expires: