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, EDDY COUNTY, NEW MEXICO.

CASE NO. 13698

AFFIDAVIT OF JOHN HUMPHREY

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

I, John Humphrey, being first duly sworn on oath, states as follows:

1. My name is John Humphrey. 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 Manchester State Exploratory Unit ("the Unit") comprised of 2240 acres, more or less, of State of New Mexico lands situated in Eddy County, New Mexico. The horizontal limits of said Unit Area are described as follows:

Township 19 South, Range 23 East, N.M.P.M.

Section 20:	All
Section 29:	All
Section 31:	E2
Section 32:	All

2. Yates, the designated Unit Operator in the Manchester State Exploratory Unit Agreement, proposes the formation of the Unit to test all formations from the surface to the base of the Morrow formation.

3. The initial unit well will be drilled at a standard location 760 feet from the North line and 660 feet from the West line of Section 20, Township 19 South, Range 23 East, NMPM, Eddy County, New Mexico to an approximate depth of 7,750 feet. The estimated costs for this wildcat well are \$2,100,000 million.

4. <u>Attachment A</u> to the Affidavit is an original copy of the Unit Agreement for the proposed Manchester State Exploratory Unit. This agreement is on the New Mexico State Land Office State Unit Agreement form.

> BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Case Nos. <u>13698</u> Exhibit No. 1 Submitted by: Yates Petroleum Corporation Hearing Date: April 27, 2006

5. <u>Attachment B</u> to the Affidavit is the plat to the Unit Agreement that shows the boundaries of the Manchester State Exploratory Unit and the location of the initial unit test well.

6. <u>Attachment C</u> to this Affidavit is a copy of Schedule B to the Unit Agreement for the Manchester State Exploratory Unit that identifies the working interest ownership in the unit area. Approximately 84% percent of the working interest in the Unit Area is owned by Yates and its affiliated companies and 100% of the working interest is committed to the Unit.

7. The schedule under <u>Attachment C</u> 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. <u>Attachment D</u> 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 Manchester State Exploratory Unit.

8. All of Yates' interest in the Unit Area have been committed to the Unit.

9. Attachment \underline{E} to this affidavit is a Net Sand Isopach Map for the Lower Morrow formation showing the trend of this fluvial channel through the proposed unit area. Regional subsurface mapping in the area indicate Lower Morrow channels exist across the proposed unit.

10. Attachment F is a West to East Stratigraphic Cross Section A-A' showing the characteristics of the sand in the channel and on the over bank edges. Major fields that lies along this trend includes Little Box Canyon and numerous wells to the north within the channel average 700-800 MMCF/well.

11. <u>Attachment G</u> is an Upper Wolfcamp Type Log for Yates' Gumby Bag Federal No. 1 located in Section 17 immediately north of the proposed unit which shows the porosity and gas shows while drilling. Another primary target within the proposed unit area is the Upper Wolfcamp Limestone/Dolomite horizontal play at an approximate depth of 4650 feet. There has been production from this zone to the north of the proposed unit, most notably from the Frank State No. 1 Well in Section 7 which had a cumulative production of 414 MMCF. All the wells within this area that have produced from this zone are vertical wells. It is possible that a significant increase in production would result from using horizontal drilling technology due to the heterogeneous nature of porosity development. This has been successful to the northwest of the proposed unit.

12. The unit covers an area that can be reasonably developed under a unit plan.

13. The primary target is the Lower Morrow Sandstones formation with upper Wolfcamp Limestone/Dolomite, Atoka, Strawn (sands) and the Upper Pennsylvanian (Lime) production possible. 14. If the initial unit well is successful, additional wells will be drilled in the Unit Area. Accordingly, approval of the unit agreement will result in the efficient recovery of hydrocarbons.

15. Approval of the Manchester 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.

Lota J / Simphie Schier Geologist

SUBSCRIBED AND SWORN before me on this 25th day of April, 2006.

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