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, CHAVES COUNTY, NEW MEXICO.

CASE NO. 13529

AFFIDAVIT OF H. TIM MILLER

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

- I, H. Tim Miller, being first duly sworn on oath, states as follows:
- 1. My name is Tim Miller. I reside in Carlsbad, New Mexico. I am the petroleum geologist employed by Yates Petroleum Corporation ("Yates") who is responsible for the formation of the proposed Stadium State Exploratory Unit ("the Unit") comprised of 960 acres, more or less, of State lands situated in Chaves County, New Mexico. The horizontal limits of said Unit Area are described as follows:

Township 12 South, Range 26 East, N.M.P.M.

Section 15: W2 Section 16: All

- 2. Yates, the designated Unit Operator in the Stadium State Exploratory Unit Agreement, proposes the formation of the Unit to test all formations from the surface to the top of the Pre-Cambrian formation.
- 3. The initial unit well will be drilled at a standard gas well location 1980 feet from the North line and 1980 feet from the West line of Section 16, Township 12 South, Range 26 East, NMPM, Chaves County, New Mexico with a proposed total depth of 6,175 feet.
- 4. Attachment A to this Affidavit is a copy of the Unit Agreement for the proposed Stadium State Exploratory Unit. This agreement is on the New Mexico State Land Office State/Fee Unit Agreement form.
- 5. Attachment B is the plat to the Unit Agreement that shows the boundaries of the Stadium State Exploratory Unit.

 BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico
Case No. 13529 Exhibit No. I
Submitted by:

YATES PETROLEUM CORPORATION

- 6. Attachment C to this Affidavit is a copy of Schedule B to the Unit Agreement for the Stadium State Exploratory Unit that identifies the working interest ownership in the Unit Area. 100% 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 <u>Attachment C</u> also identifies the royalty interest in the Unit Area. 100% of the royalty interest is owned by the State of New Mexico and under <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 Stadium State Exploratory Unit.
 - 8. All of Yates' interest in the Unit Area has been committed to the Unit.
- 9. <u>Attachment E</u> is a Top of Siluro-Devonian Structure Map and shows Yates proposed well locations is 60 plus feet higher than the Supron Energy well in the southeast quarter of Section 16.
- 10. Attachment F is a Gross Isopach Siluro-Devonian Map and reveals that the proposed well location would have 275 feet of dolomite present. The Supron Energy well had a drill stem test from 5,900-5,965 feet in the Siluro-Devonian. The test recovered 380 feet of a trace of oil and mud. Yates believes that the packers might have been set in some very good porosity, which would hinder the recovery of oil and gas.
- 11. Attachment G is a Net Porosity Wolfcamp B Zone Map and Attachment H is a Net Porosity Wolfcamp Spear Zone Map and show prospective intervals that could be productive. The proposed location should encounter between 10 to 12 feet of net porosity greater than 4 percent in both intervals.
- 12. Attachment I is a Top of Wolfcamp Structure Map and shows that Yates proposed well location is up dip from the Supron Energy well. The map also shows that the proposed location is likely up dip from a third Wolfcamp zone above the Spear interval that drill stem tested oil, gas and water in Atlantic Richfield's well in Section 10 to the northeast.
- Attachment J is Structural Cross-Section A-A'. As shown on the cross-section, Aztec's Pecos State #1 (in Section 36) and Hrubetz's BBV Com #1 (in Section 3) were perforated and tested in the Siluro-Devonian Dolomite. The Aztec well tested 150 mcfpd from the Siluro-Devonian and the Hrubetz well tested 1,400 mcgpd from the Siluro-Devonian. Neither well was placed into production because there was no pipeline in the area and thus both were plugged and abandoned. The map also shows that between 5900—5910 feet the neutron density tool reads 27% porosity and the neutron tool reads 12% porosity in the Supron well. The caliper tool at this depth is showing mud cake at this interval which means it has permeability. The gamma ray is reading shaly, but this is possibly a hot dolomite, since the caliper is showing mud cake. If the packers were set in this interval, blocking off the porosity and permeability, the dolomite probably would have a much better show. The Supron well was never tested in

the Siluro-Devonian because a neutron source was lost in the hole from 5,000-5,010 feet. The Atlantic Richfield well (in Section 10) and Cities Service well (in Section 20) both tested oil and gas from the Siluro-Devonian on drill stem tests. The cross-section also shows that in Supron's well, the Wolfcamp B Zone and Spear Zone each have around 12% porosity on the neutron-density log. The cross-section shows both intervals in all the wells with some porosity except for the Aztec well. The Aztec well did not have electric logs run over the B Interval.

- 12. The unit covers an area that can be reasonably developed under a unit plan.
- 13. Yates is attempting to develop the Siluro-Devonian Dolomite as the main objective. The Wolfcamp is the secondary objective.
- 17. This is a high risk project, but 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.
- 18. Approval of the Stadium 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 2014 day of July, 2005.

Jina M. Romo Notary Public

Petroleum Geologist

My Commission Expires: 1/25/2007