

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

**APPLICATION OF AMTEX ENERGY, INC.  
FOR APPROVAL OF A UNIT AGREEMENT,  
LEA COUNTY, NEW MEXICO.**

**CASE NO. 14988**

**AFFIDAVIT OF SALLY MEADER-ROBERTS**

STATE OF TEXAS                    )  
  ) ss.  
COUNTY OF MIDLAND            )

I, Sally Meader-Roberts, being first duly sworn on oath, state as follows:

1. My name is Sally Meader-Roberts. I reside in Midland, Texas. I am a consulting petroleum geologist under contract to Amtex Energy, Inc. ("Amtex") and responsible for the formation of the proposed Merchants State Unit ("the Unit") comprised of 1280.12 acres, more or less, of State lands situated in Lea County, New Mexico. The horizontal limits of the Unit Area are described as follows:

**Township 21 South, Range 33 East, N.M.P.M.**

Section 35: All

**Township 22 South, Range 33 East, N.M.P.M.**

Section 2: All

2. Amtex, the designated Unit Operator in the Merchants State Unit Agreement, proposes to test all formations from the top of the Bone Spring (8870 feet) to the top of the Strawn formation (13,500 feet).

3. An initial science well will be drilled to evaluate all formations in the proposed unitized interval.

4. Depending on results of shows, side wall core analysis, petrophysical evaluation, etc, the reservoir with the greatest initial potential will be targeted for the first horizontal well in the Unit.

5. **Attachment A(1)** is a Structure Map on the Top of the Bone Spring Lime which shows a trough trending N-S through the acreage A(1). Also included in **Attachment A(2)** is a Structure Map on the Penn Marker. The Penn marker is a thin limestone bench just below the Penn unconformity, which is consistent across much of the northern Delaware Basin. This structure map simply shows regional dip to the South at approximately 100 feet per mile. There are not enough deep wells in the area to make meaningful isopach maps, let alone meaningful isolith maps and porosity isopach maps, of individual (potential) reservoirs. Encouraging shows in the Enron Grama Ridge 35 State #1 well (2310' FSL, 990' FEL, Section 35, T-21-S, R-33-E, on Unit acreage) lead us to believe, however, that a number of heretofore untested potential reservoirs exist under the Unit acreage.

6. **Attachment B** is a copy of the type log Enron Grama Ridge 35 State #1 well. Formation tops and mud log shows are marked on this type log. Bone Spring Sands to the West of the Unit acreage generally trend N-S. More data (additional wells) are needed to effectively determine the correct trend for the sands. The "Avalon" zones are not blanket in this portion of the Delaware Basin. In general, the potential "Avalon" intervals do not trend N-S. Again, however, there is not enough well control to determine the direction of deposition and, hence, potential reservoir trends. Wolfcamp and upper Penn (Cisco, Canyon, Strawn) potentials come solely from shows in the Grama Ridge 35 State #1 well. There is no nearby production for any of these zones. There are no nearby wells that penetrate the Strawn to make any meaningful isopach, isolith, or porosity isopach maps of any of these zones. Thus, a science well, with an extensive suite of electric logs, side wall cores, kerogen evaluation, depositional trends, true lithology, fracture orientation, porosity, and permeability for each individual potential reservoir is critical. This data is also required to determine the orientation of the initial horizontal well and all subsequent wells. After evaluation of all this data, the best potential reservoir identified will be the first target for a horizontal well. Accordingly, development under a Unit plan is important to effectively and properly evaluate the potential of all these zones.

7. Objectives within the unitized area will be based on results from the science well. However, based on shows in the Grama Ridge 35 State #1 well, potential reservoirs could include the "Cut-off Sand" (sometimes referred to as "Avalon" sand), "Avalon" zones from 9200-9900 feet (overall), the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Bone Spring sands, and possibly the Wolfcamp, Cisco, Canyon, and Strawn formations. Again, the full potential is unknown until a science well can be drilled and evaluated within the Unit area.

8. This is a costly and high-risk project. The economics may be marginal in a vertical well completion and, most likely, will require horizontal well development for the Unit area to be economically viable.

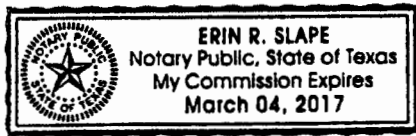
9. In my opinion, the Unit covers an area that can be reasonably developed under a unit plan, and formation of this exploratory unit will result in the efficient recovery of hydrocarbons.

10. In my opinion, approval of the Merchants State Unit and the development of the Unit Area pursuant to a unit plan are in the best interest of conservation, the prevention of waste, and the protection of correlative rights.

FURTHER AFFIANT SAYETH NOT.

Sally Meader - Roberts  
CPG 2690

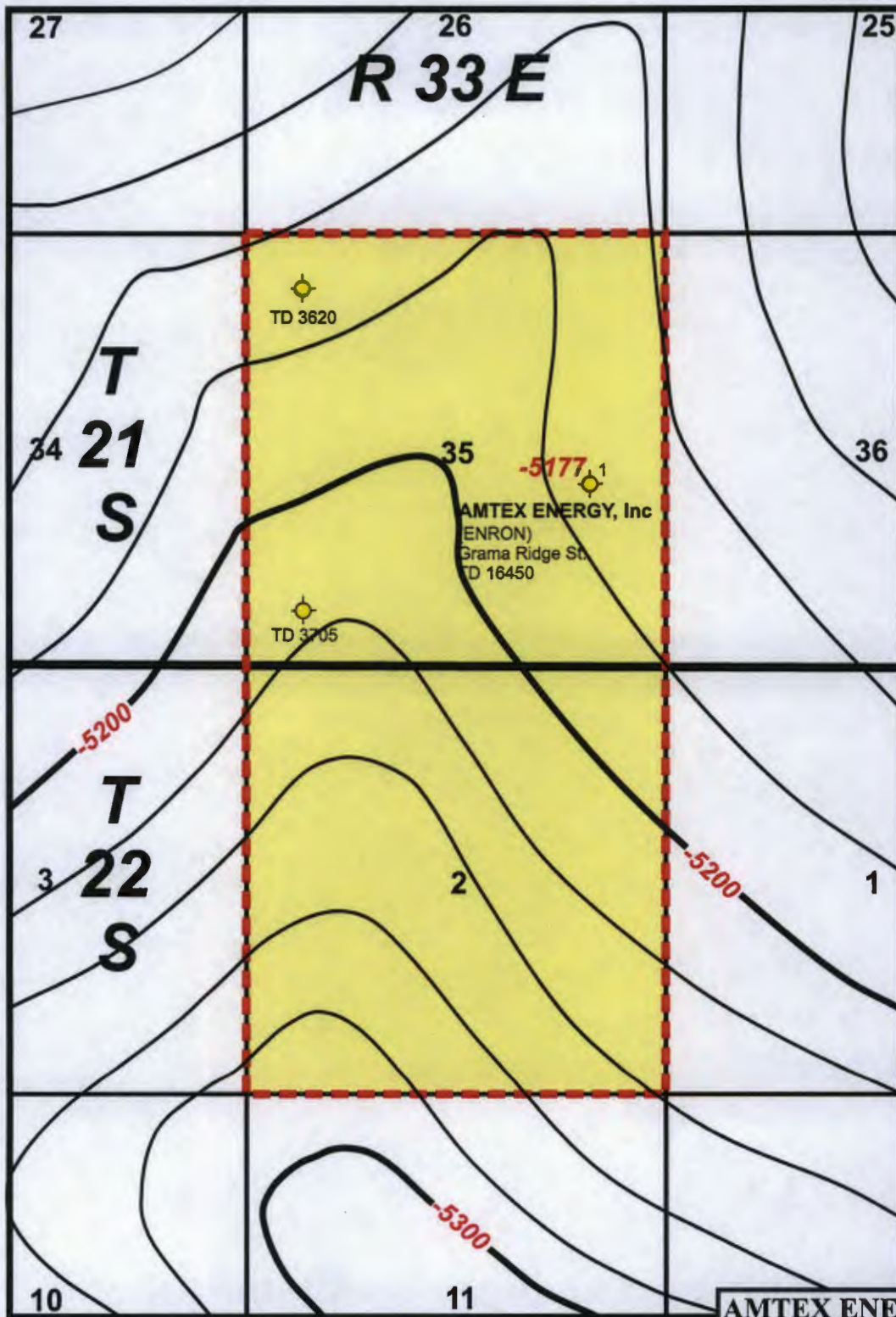
SUBSCRIBED AND SWORN before me on this 21<sup>st</sup> day of May 2013.



Erin R. Slape  
Notary Public

My Commission Expires:

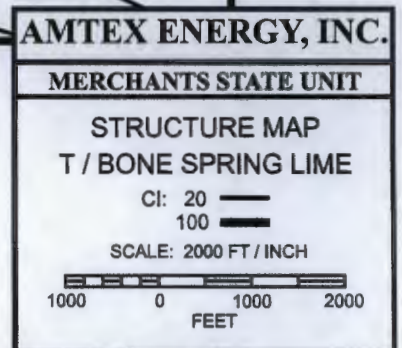
March 4, 2017



Merchants State Unit Outline



Amtex Energy, Inc 100% GWI







Merchants State Unit Outline



Amtex Energy, Inc 100% GWI

