

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

**APPLICATION OF DEVON ENERGY PRODUCTION  
COMPANY LP FOR A STANDARD HORIZONTAL SPACING  
AND PRORATION UNIT AND COMPULSORY POOLING,  
LEA COUNTY, NEW MEXICO**

**Case No. 20085**

**SECOND AMENDED AFFIDAVIT OF KENTON SHAW**

STATE OF OKLAHOMA    )  
  ) ss.  
COUNTY OF OKLAHOMA )

I, being duly sworn on oath, state the following:

1. I am over the age of 18, and I have personal knowledge of the matters stated herein.
2. I am employed as a petroleum geologist for Devon Energy Production Company, L.P. (“Devon”), and I am familiar with the subject application and the geology involved.
3. This affidavit is submitted in connection with the filing by Devon of the above-referenced compulsory pooling application pursuant to 19.15.4.12.A(1) NMAC.
4. I seek to be qualified by the Oil Conservation Division (“Division”) as an expert petroleum geologist. I have not previously made my credentials a matter of record and been qualified as an expert by the Division.
  - a. I completed a Bachelor of Science in geology from Grand Valley State University and Master of Science in geology with an emphasis in geophysics from Baylor University in 2016.
  - b. I have worked for Devon as a geophysicist since 2016 and in New Mexico acreage since 2017.

5. **Exhibit A** is a Bone Spring structure map. The horizontal spacing and proration unit (“HSU”) being pooled is outlined by a red rectangle. Strata dip approximately 200’ westward across the HSU.

6. Devon seeks to dedicate the HSU to its proposed Chiles 28-21 State Com 1H well (“Chiles well”) to a depth sufficient to test the 3<sup>rd</sup> Bone Spring Sand, defined as the stratigraphic equivalent of 11,465’ to 11,784’ beneath Kelly Bushing elevation of 3,743 feet, as interpreted on the Gamma Ray log for the Pogo Producing Company State L-922 2 well (API No. 30-025-25944-0000) located 1,780 feet from the South line and 1,980 feet from the East line of Section 28, Township 21 South, Range 34 East, Lea County, New Mexico.

7. The Pogo Producing Company State L-922 2 well (API No. 30-025-25944) is shown in the Exhibits to this Affidavit. It is my opinion that this well is an appropriate well to use for purposes of defining the depth of the HSU. A type log for the State L-922 2 well is shown in greater detail as Exhibit A attached to the Second Amended Affidavit of Sheldon Moos, Devon’s expert petroleum engineer, submitted herewith.

8. The apparent structural dip along the proposed Chiles well is around 1°.

9. The Chiles well is positioned a quarter-mile west of the Bell Lake Fault. This fault will not interfere with horizontal development in the HSU.

10. The Chiles well is oriented north-south. The preferred well orientation in this area is north-south. This is because the inferred orientation of the maximum horizontal stress is roughly east.

11. **Exhibit A** identifies wells in the vicinity of the HSU, with a cross-section line running from A to A’.

12. **Exhibit B** is a Bone Spring stratigraphic cross-section hung on the top of the Bone Spring. This cross-section shows consistent target thickness in wells near the Chiles well. The well logs on the cross-section give a representative sample of the Bone Spring formation in the area and demonstrate reasonable well control. The 3<sup>rd</sup> Bone Spring Sand target interval is indicated by the green line in Exhibit B.

13. **Exhibit C** is a gross isochore of the Bone Spring formation. The map shows thickness for the 3<sup>rd</sup> Bone Spring Sand interval indicated in Exhibit B. The 3<sup>rd</sup> Bone Spring Sand is uniform across the proposed well unit. The 2<sup>nd</sup> Bone Spring Sand is also continuous across the well unit, as is the interval between the 2<sup>nd</sup> Bone Spring Sand and the 3<sup>rd</sup> Bone Spring Sand.

14. I conclude from the attached exhibits that:

- a. The horizontal spacing and proration unit is justified from a geologic standpoint.
- b. There are no structural impediments or faulting that will interfere with horizontal development.
- c. Each quarter-quarter section in the unit will contribute more or less equally to production.

15. The granting of this application is in the interests of conservation, the prevention of waste, and the protection of correlative rights.

16. The Exhibits to this affidavit were prepared by me or compiled from Devon's company business records.

17. The foregoing is correct and complete to the best of my knowledge and belief.

FURTHER AFFIANT SAYETH NAUGHT

  
Kenton Shaw

Subscribed to and sworn before me this 19<sup>th</sup> day of December, 2018.

Rachel Gerlach  
Notary Public



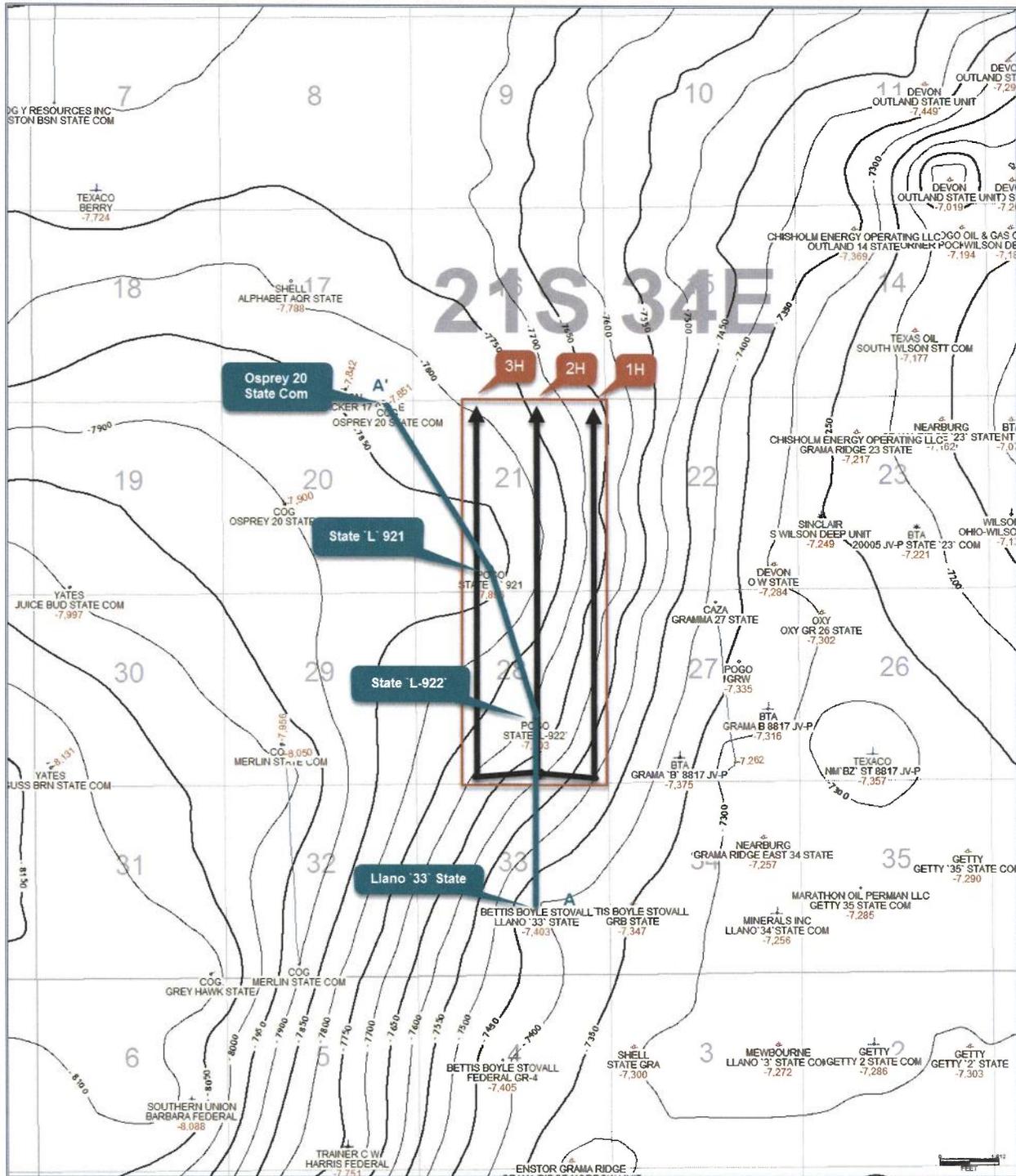


Exhibit A: 3<sup>rd</sup> Bone Spring Sandstone structure map. Contour interval = 50'. Cross-section (Exhibit B) indicated by green line labeled A to A'. The red rectangle indicates the unit being pooled.

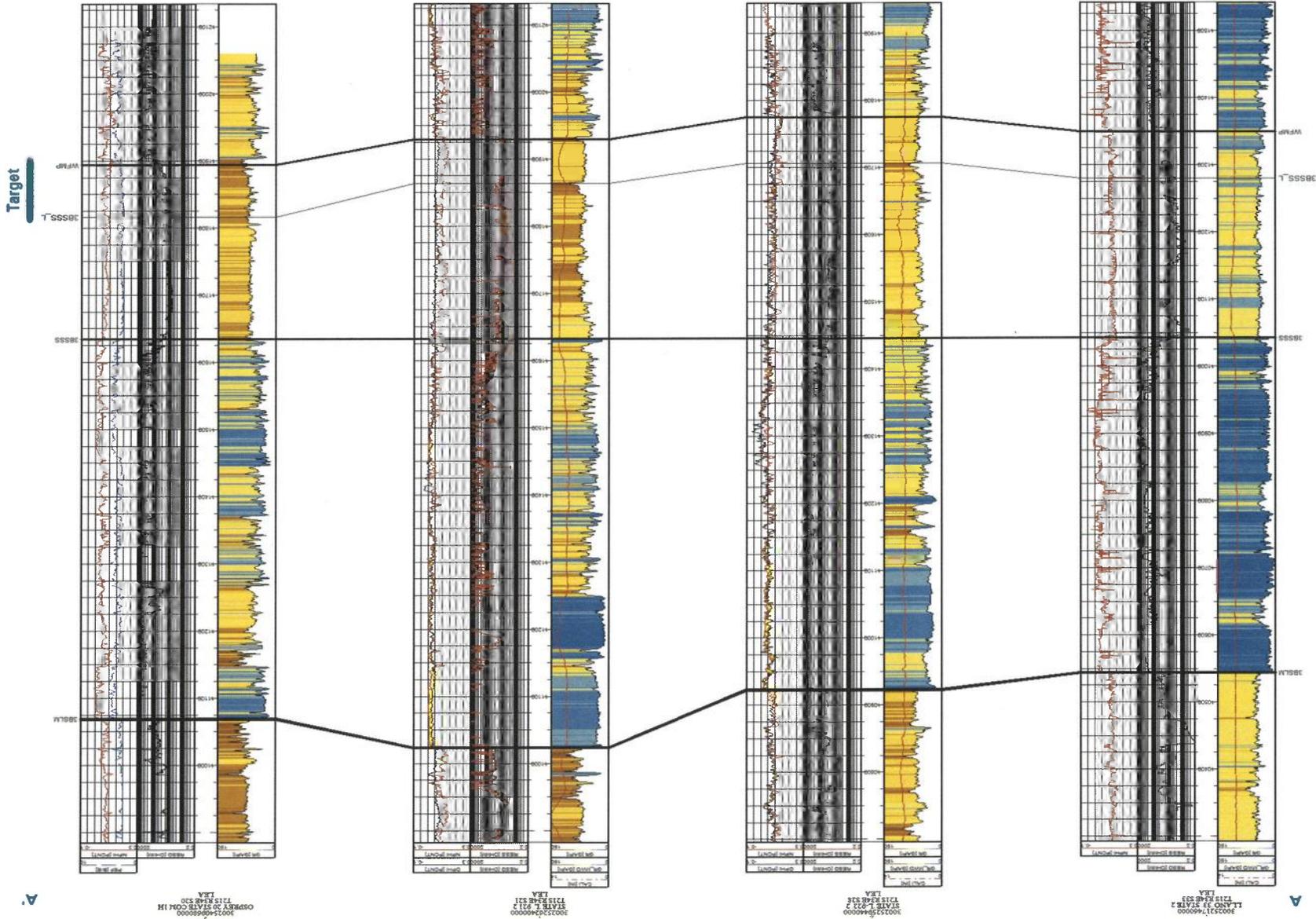


Exhibit B: Cross-section A to A', Stratigraphic cross-section hung on 3rd Bone Spring Sand top. Target interval indicated by blue line on right side of figure.

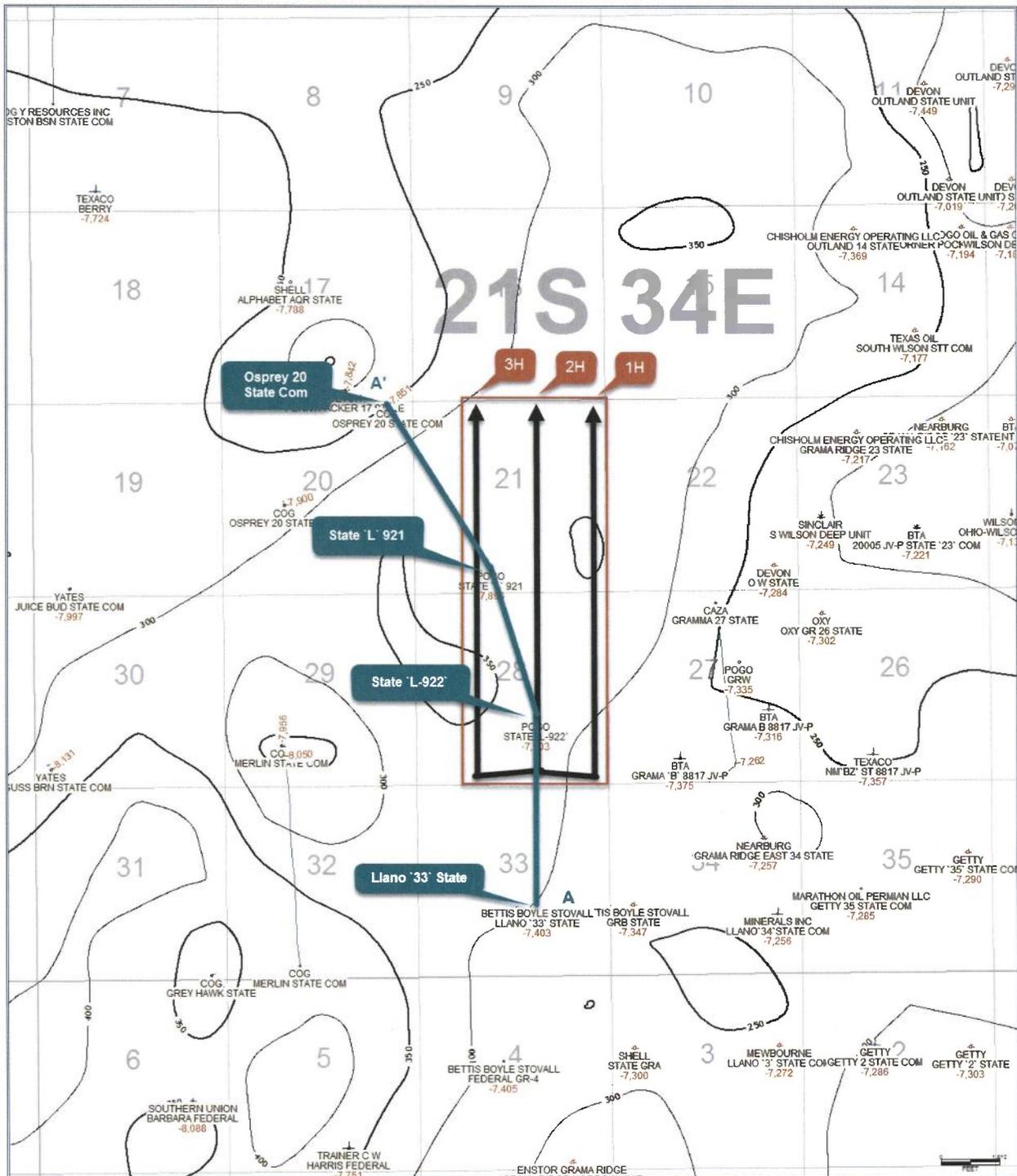


Exhibit C: Isocore thickness of target interval indicated on cross-section (Exhibit B). Contour interval = 50'. Cross-section indicated by blue line labeled A to A'. The red rectangle indicated the unit being pooled.