

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

APPLICATION OF EOG RESOURCES, INC.
FOR COMPULSORY POOLING, NON-STANDARD
SPACING AND PRORATION UNIT,
LEA COUNTY, NEW MEXICO.

CASE NO. 20829

AFFIDAVIT

STATE OF TEXAS)
) ss.
COUNTY OF MIDLAND)

Patrick Geesaman, being duly sworn, deposes and states:

1. I am over the age of 18, I am a Geologist for EOG Resources Inc., and have personal knowledge of the matters stated herein. I have been qualified by the Oil Conservation Division (“Division”) as an expert petroleum geologist.

2. **Exhibit 1** is a geology study I prepared for the Fearless 26 Fed Com #503H (upper target) and the Fearless 26 Fed Com #504H (lower target) wells to test the 2nd Bone Spring Sand.

4. **Exhibit 2** a structure map of the 3rd Bone Spring Carbonate (base 2nd Bone Spring Sand). The contour interval used in this exhibit is 20 feet. This exhibit shows that the formation dips to the southeast.

5. **Exhibit 3** identifies 3 vertical wells in the vicinity of the proposed 2nd Bone Spring Sand wells, shown by a line of cross-section running from A to A’.

6. **Exhibit 4** a stratigraphic cross section hung on the top of the 3rd Bone Spring Carbonate (base 2nd Bone Spring Sand). The well logs on the cross-section give a representative sample of the 2nd Bone Spring Sand in the area. The target zone is identified by the words “Producing Zone” and the shaded area across the cross section, along with red arrows.

7. **Exhibit 5** a Gross Interval Isochore of the 2nd Bone Spring Sand. The isochore map shows approximate thickness of the 2nd Sand to be 420 feet in the vicinity of the Fearless 26 Fed Com #503H and #504H.

I conclude from the maps that:

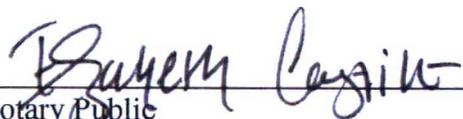
- a. The horizontal spacing units are justified from a geologic standpoint.
- b. There are no structural impediments or faulting that will interfere with horizontal development.
- c. Each quarter section encountered by each of the wells in the proposed unit will contribute more or less equally to production,

8. In my opinion, the granting of EOG's application is in the interests of conservation and the prevention of waste.



PATRICK GEESAMAN

SUBSCRIBED AND SWORN to before me this 13th day of November, 2019 by PATRICK GEESAMAN on behalf of EOG Resources Inc.



Notary Public

My Commission Expires:

5/21/22

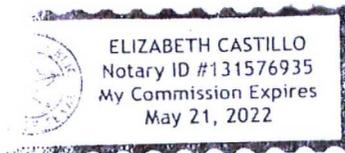


Exhibit 1- Geologic Study of the 2nd Bone Spring Sand (Fearless 26 Fed Com #503H and 504H

Fearless 26 Fed Com #503H and 504H were drilled in the upper and lower 2nd Bone Spring Sand at depths of 10,480' and 10,760' respectively. Both wells target sandy deposits within the 400 plus foot thick formation that are correlative across multiple miles. Similar targets have been drilled in nearby acreage by both EOG and our competitors with economic results.

Exhibit 2- Top of 3rd Bone Spring Carbonate (base 2nd Bone Spring Sand) TVD Subsea Structure Map

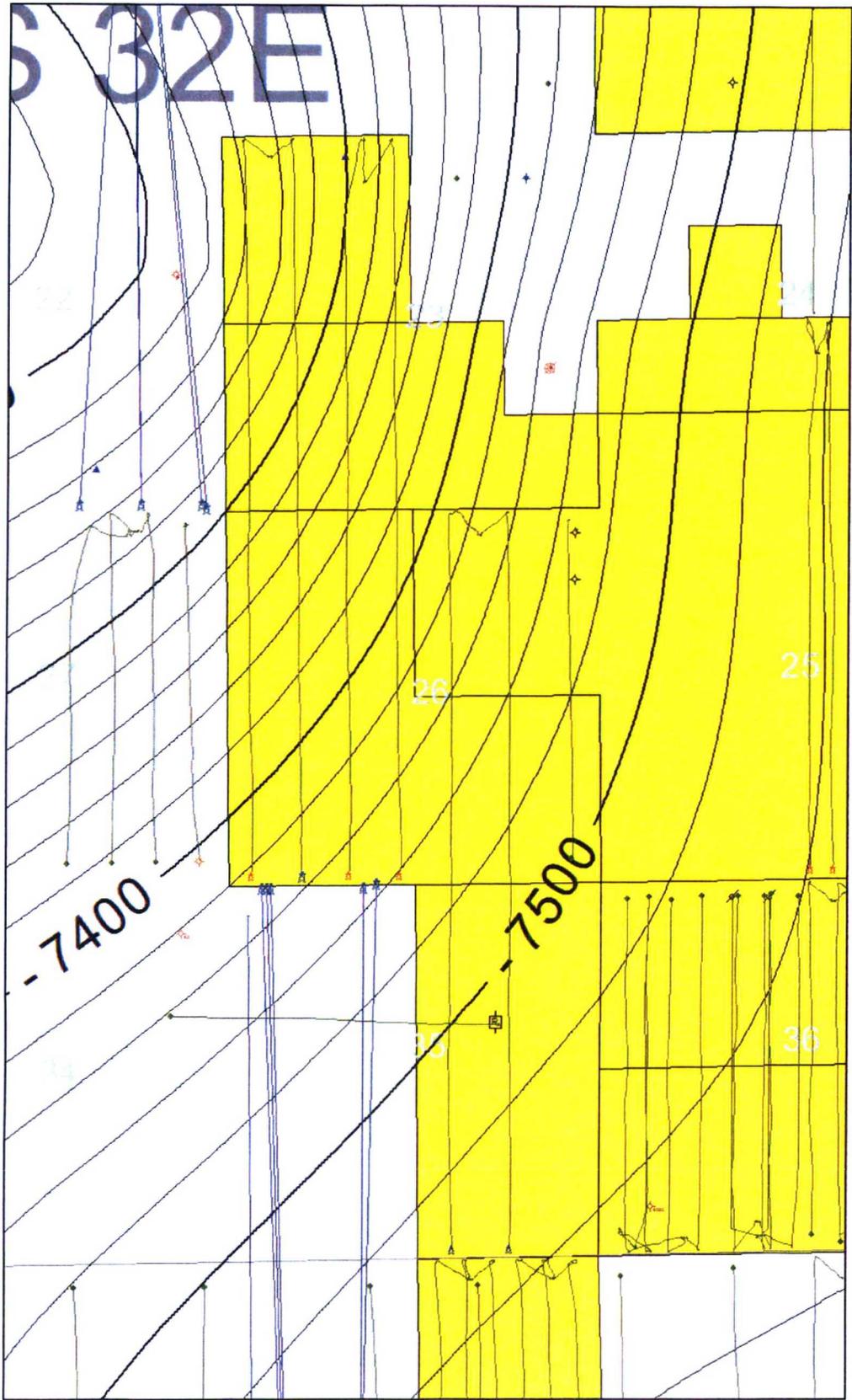


Exhibit 3- Map of vertical wells used in stratigraphic cross section

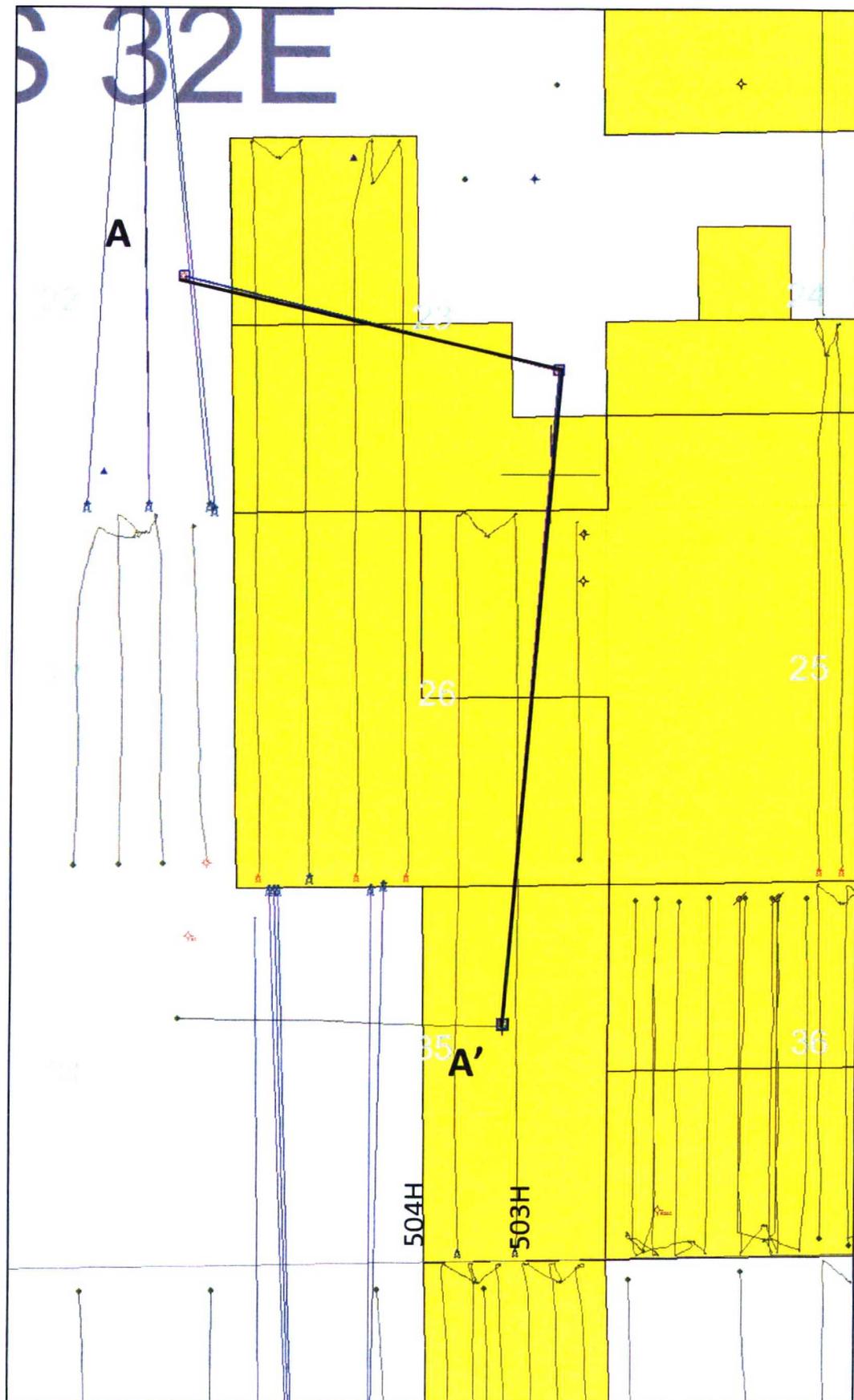


Exhibit 4- Stratigraphic cross section hung on top of 3rd Bone Spring Carb (Base 2nd Bone Spring Sand)

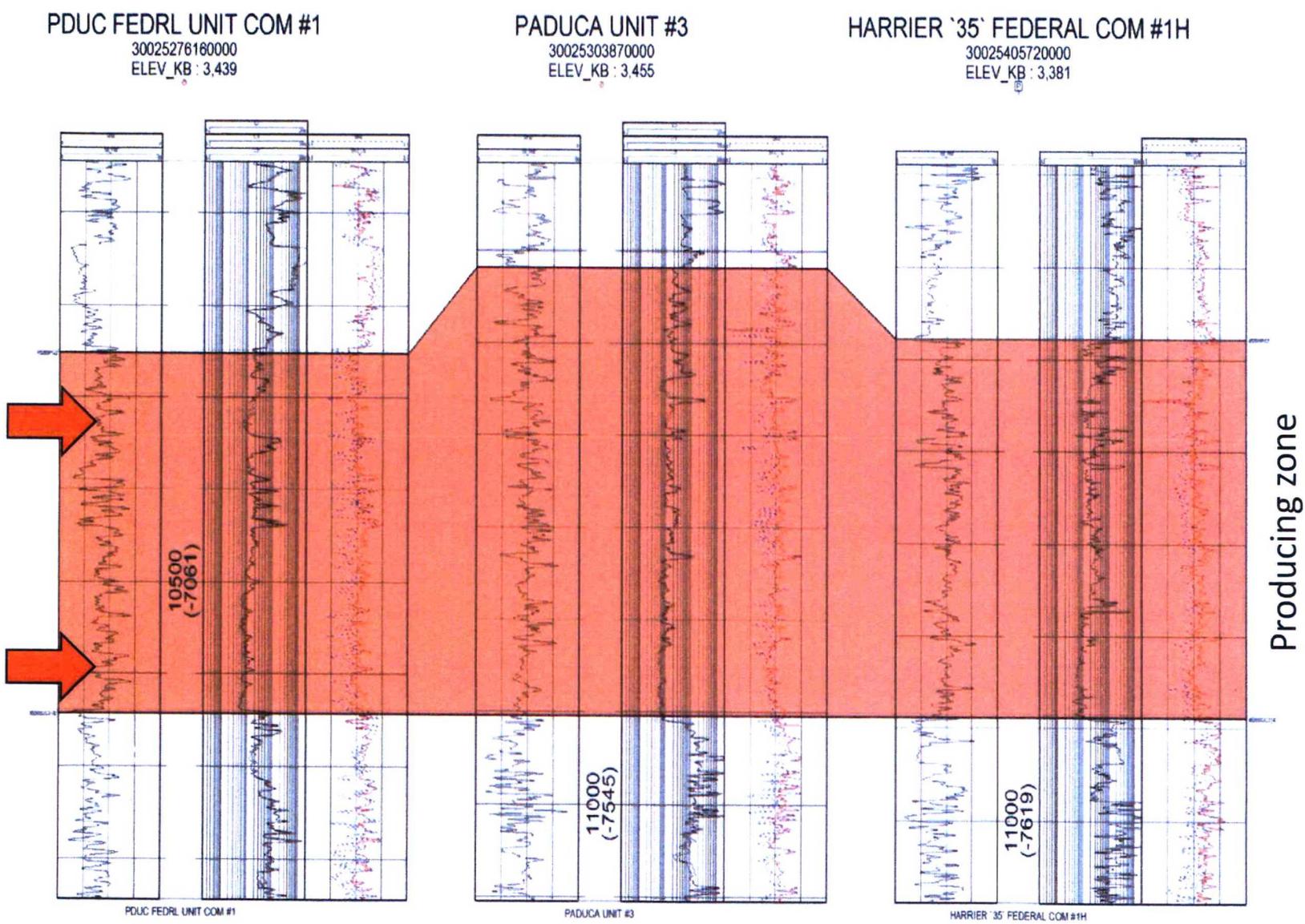


Exhibit 5- Isochore of 2nd Bone Spring Sand

