

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

**APPLICATION OF CIMAREX ENERGY CO.,
FOR A HORIZONTAL SPACING UNIT AND
COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO**

Case Nos. 22754, 22755, & 22756

SUPPLEMENTAL AFFIDAVIT OF STACI MUELLER

I, STACI MUELLER, 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 Cimarex Energy Co. ("Cimarex"), and I am familiar with the subject application and the geology involved.
3. This affidavit is submitted in connection with the filing by Cimarex of the above-referenced compulsory pooling application pursuant to 19.15.4.12.A(1) NMAC.
4. I have testified previously by affidavit before the Oil Conservation Division ("Division") as an expert petroleum geologist; my credentials have been made a matter of record, and I have been qualified as an expert by the Division.
 - a. I have a Bachelor of Science Degree in Geophysical Engineering from Colorado School of Mines, and a Master of Science Degree in Geophysics from Colorado School of Mines.
 - b. I have worked on New Mexico Oil and Gas matters since July 2018.
5. Exhibit B4 shows that there is ~500ft vertical separation between the 3rd Sand and 2nd Sand targets, which is why drilling into the 3rd Bone Spring is feasible. The total 3rd Sand thickness ranges from ~270-300ft (Exhibit B1), and the 2H targets the basal 3rd Sand

Shale, which was successfully targeted in the Mescalero Ridge 21 Federal 1H. the depth of the base of the 2nd Sand was initially given as 10,527' TVD as seen on the Triple Combo Log in the Mescalero Ridge 20 Federal 1 (API# 30-025-36099), but the actual depth of the base of the 2nd Sand is 10,290' TVD.

6. The granting of this Application is in the best interests of conservation, the prevention of waste, and the protection of correlative rights, and will avoid the drilling of unnecessary wells.

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

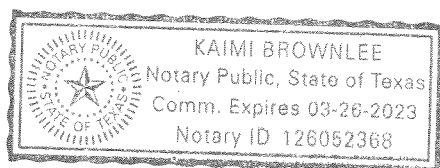
[Signature page follows]

FURTHER AFFIANT SAYETH NAUGHT



Staci Mueller

Subscribed to and sworn before me this 17 day of May, 2022.


Notary Public