

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

**APPLICATION OF CENTENNIAL
RESOURCE PRODUCTION, LLC
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO.**

CASE NO. 22766

NOTICE OF REVISED EXHIBIT D

Centennial Resource Production, LLC, provides notice that it has filed the attached REVISED EXHIBIT D for Case No. 22766 to correctly describe that the structure map shows the Bone Spring dipping gently to the northwest.

Respectfully submitted,

HOLLAND & HART LLP



Michael H. Feldewert
Adam G. Rankin
Julia Broggi
Paula M. Vance
Post Office Box 2208
Santa Fe, New Mexico 87504-2208
(505) 988-4421
(505) 983-6043 Facsimile
mfeldewert@hollandhart.com
agrarkin@hollandhart.com
jbroggi@hollandhart.com
pmvance@hollandhart.com

**ATTORNEYS FOR CENTENNIAL RESOURCE
PRODUCTION, LLC**

CERTIFICATE OF SERVICE

I hereby certify that on June 3, 2022, I served a copy of the foregoing document to the following counsel of record via Electronic Mail to:

James Bruce
Post Office Box 1056
Santa Fe, New Mexico 87504
(505) 982-2043
jamesbruc@aol.com

Attorney for MRC Permian Company



Paula M. Vance

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

**APPLICATION OF CENTENNIAL
RESOURCE PRODUCTION, LLC FOR
COMPULSORY POOLING, LEA COUNTY,
NEW MEXICO.**

CASE NO. 22766

AFFIDAVIT OF ISABEL HARPER

Isabel Harper, of lawful age and being first duly sworn, declares as follows:

1. My name is Isabel Harper. I work for Centennial Resource Production, LLC (“Centennial”) as a geologist.
2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum geology. My credentials as a petroleum geologist have been accepted by the Division and made a matter of record.
3. I am familiar with the application filed by Centennial in this case and I have conducted a geologic study of the lands in the subject area.
4. Centennial is targeting the Bone Spring formation in this case.
5. **Centennial Exhibit No. D-1** is a locator map. It shows Centennial’s acreage in yellow and the path of the proposed wellbore, with the surface hole and bottom hole locations, as well as the outline of the proposed spacing unit.
6. **Centennial Exhibit No. D-2** is a subsea structure map that I prepared off the top of the Third Bone Spring formation. The contour interval is 100 feet. The structure map shows the Bone Spring dipping gently to the northwest. The structure appears consistent across the proposed wellbore paths. Based on this subsea structure map, I do not observe

**BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Revised Exhibit No. D
Submitted by: Centennial Resource Production, LLC
Hearing Date: June 2, 2022
Case No. 22766**

any faulting, pinchouts, or other geologic impediments to developing the targeted interval with horizontal wells in this area.

7. **Centennial Exhibit No. D-3** shows a line of cross-section in blue consisting of wells penetrating the Bone Spring formation that I used to construct a stratigraphic cross-section from A to A'. I consider these wells to be representative of the geology in the area.

8. **Centennial Exhibit No. D-4** is a stratigraphic cross-section that I prepared displaying open-hole logs run over the Bone Spring from the representative wells denoted from A to A'. For each well in the cross-section, the exhibit shows the following logs: gamma ray, resistivity, and porosity. The proposed target interval is labeled and marked. The logs in the cross-section demonstrate that the target interval is continuous and consistent in thickness across the entire spacing unit.

9. In my opinion, the stand-up orientation of the proposed wells is the preferred orientation for horizontal well development in this area and is appropriate to develop the subject acreage efficiently and effectively.

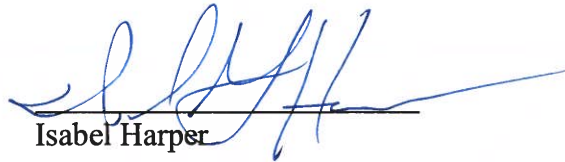
10. Based on my geologic study, the Bone Spring formation underlying the subject area is suitable for development by horizontal wells and the acreage comprising the proposed spacing unit will contribute more-or-less equally to the production from the wellbores. I have not identified any geologic impediments to drilling horizontal wells in the area of the spacing unit proposed.

11. In my opinion, horizontal drilling will be the most efficient method to develop this acreage, to prevent the drilling of unnecessary wells, and to result in the greatest ultimate recovery,

and approving Centennial's application will be in the best interest of conservation, the prevention of waste, and protection of correlative rights.


12. **Centennial Exhibit Nos. D-1 through D-4** were either prepared by me or compiled under my direction and supervision.

FURTHER AFFIANT SAYETH NAUGHT.


Isabel Harper

STATE OF COLORADO)
)
COUNTY OF DENVER)

SUBSCRIBED and SWORN to before me this 31st day of May 2022 by Isabel Harper.


NOTARY PUBLIC

My Commission Expires:

10/07/2025

