

**BEFORE THE OIL CONSERVATION DIVISION
EXAMINER HEARING JULY 11, 2019**

CASE No. 20639

HANLEY W M 1F WELL

SAN JUAN COUNTY, NEW MEXICO



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

**APPLICATION OF HILCORP ENERGY
COMPANY FOR AN EXCEPTION TO THE
WELL DENSITY REQUIREMENTS OF THE
SPECIAL RULES AND REGULATIONS FOR
THE BLANCO-MESAVERDE GAS POOL,
SAN JUAN COUNTY, NEW MEXICO.**

CASE NO. 20639

AFFIDAVIT OF BRAD PEARSON IN SUPPORT OF CASE NO. 20639

I, Brad Pearson, being of lawful age and duly sworn, declare as follows:

1. My name is Brad Pearson. I work for Hilcorp Energy Company ("Hilcorp") as a Landman.
2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum land matters. My credentials as a petroleum landman have been accepted by the Division and made a matter of record.
3. I am familiar with the application filed by Hilcorp in this case, and I am familiar with the status of the lands in the subject areas.
4. None of the affected parties in this case has indicated opposition, and therefore I do not expect any opposition at the hearing.
5. Hilcorp seeks an exception to the well density requirements of Rule I.B of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool to permit it to complete and simultaneously produce two Mesaverde gas wells within the same non-standard 160-acre, more or less, spacing and proration unit.

6. The Blanco-Mesaverde Gas Pool is governed by Special Rules and Regulations which provide for 320-acre spacing and proration units on which as many as four wells may be drilled. The Special Rules therefore limit the number of wells in a spacing unit to four and the number of wells in a half section within a spacing unit to two. The Special Rules also provide that well density exceptions can be approved only after notice and hearing.

7. Hilcorp is the operator of a non-standard 160-acre, more or less, spacing and proration unit in the Blanco-Mesaverde Gas Pool comprised of the SW/4 of Section 18, Township 29 North, Range 10 West, San Juan County, New Mexico, in which the following well is currently completed and producing:

- a. Hanley B 1 (API No. 30-045-23112) Sec. 18, T29N, R10W (Unit N).

8. Hilcorp now proposes to simultaneously dedicate and produce the following second well within a quarter section, at the following location:

- a. **Hanley W M 1F** (API No. 30-045-34555) Sec. 18, T29N, R10W, with a surface location in Unit N and a bottom-hole location in Unit L.

9. This will be the second well within the same spacing unit with two wells in the same quarter section.

10. Hilcorp therefore requests that the Division enter an order granting an exception to the well density requirements of Rule 1.B of the Special Rules and Regulations of the Blanco-Mesaverde Pool to authorize Hilcorp to simultaneously dedicate and produce the **Hanley W M 1F** (API No. 30-045-34555) within the SW/4 of Section 18, Township 29 North, Range 10 West, permitting the total number of wells dedicated and producing within this non-standard spacing and proration unit to two, with two wells in the same quarter section.

11. The proposed simultaneous dedication of the proposed well, which is currently producing in the Dakota formation, within the Blanco-Mesaverde is part of Hilcorp's strategy to use existing wells completed in other zones to economically target development of incremental Mesaverde gas reserves in areas where there is not adequate gas drainage.

12. The Division has pre-approved downhole commingling the Dakota formation with the Blanco-Mesaverde Gas Pool.

13. Pursuant to the Special Rules and Division precedent, Hilcorp provided notice to all Division-designated operators in offsetting 320-acre spacing units. Where Hilcorp is the operator, Hilcorp identified all working interest owners in offsetting spacing units as affected parties requiring notice. In some offsetting spacing units, Hilcorp may own 100% of the working interest, in which case there are no affected parties to notice.

14. **Exhibit A-1** is an overview map identifying the location of the subject Blanco-Mesaverde Gas Pool spacing unit, in the green outline, to which the well will be simultaneously dedicated.

15. Exhibit A-1 also identifies the locations of the existing Mesaverde wells as dark blue circles, as well as the subject well as a dark blue triangle.

16. Exhibit A-1 also depicts the notice area comprised of the offsetting spacing units, which is the shaded area within the dark blue hashed line surrounding the subject spacing unit outlined in green. Hilcorp has provided notice of this application to the operators within the notice area. In some instances, Hilcorp may be the operator of offsetting spacing units within the notice area, in which case notice of the application was provided to all the working interest owners within the notice area.

17. **Exhibit A-2** identifies the affected parties within the offsetting spacing units who are required to be noticed. I provided a list of all affected parties requiring notice to Holland & Hart LLP. All parties were locatable.

18. To the best of my knowledge, the addresses used to provide notice are valid and correct addresses which have been recently used by Hilcorp and at which mail has been received by the notice parties.

19. Exhibits A-1 and A-2 were prepared by me or under my direction and supervision.

FURTHER AFFIANT SAYETH NAUGHT.

Bradley W. Pearson
Brad Pearson

STATE OF TEXAS)
COUNTY OF Harris)

SUBSCRIBED and SWORN to before me this 2nd day of July, 2019 by Brad Pearson.

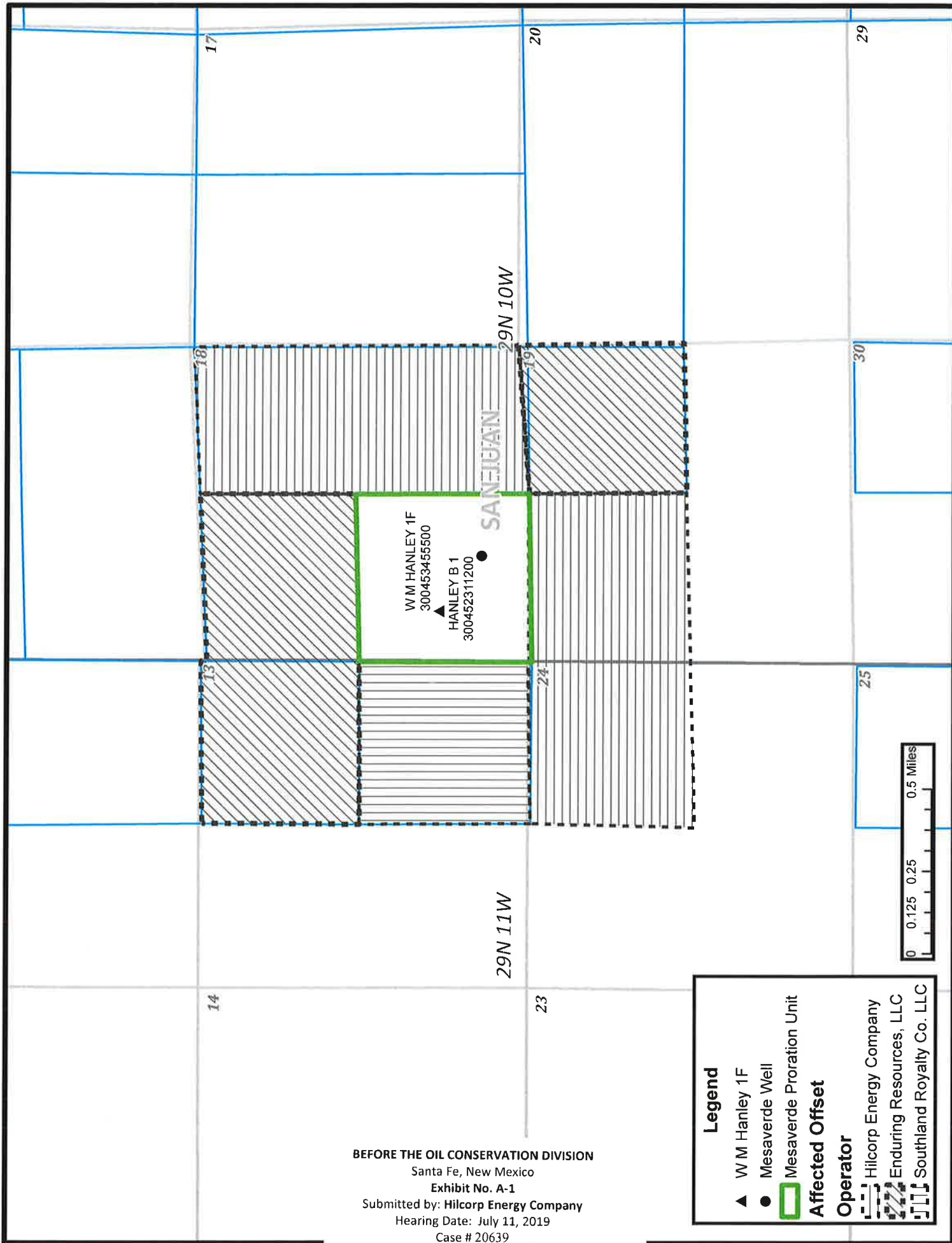
[Signature]
NOTARY PUBLIC

My Commission Expires:

02/08/2023



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BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. A-1
Submitted by: Hilcorp Energy Company
Hearing Date: July 11, 2019
Case # 20639

Legend

▲ WM Hanley 1F

● Mesaverde Well

■ Mesaverde Proration Unit

■ Affected Offset

Operator

■ Hilcorp Energy Company

■ Enduring Resources, LLC

■ Southland Royalty Co. LLC




Name	Address	City	State	Zip Code	Remarks	Offset Drillblock
HILCORP ENERGY COMPANY	1111 TRAVIS	HOUSTON	TX	77002	OFFSET OPERATOR	
SOUTHLAND ROYLATY COMPANY LLC	400 W 7TH STREET	FT WORTH	TX	76102	OFFSET OPERATOR	SE/4 Sec 13-T29N-R11W
ENDURING RESOURCES IV LLC	1050 17TH STREET SUITE 2500	DENVER	CO	80265	OFFSET OPERATOR	NE/4 Sec 13-T29N-R11W NW/4 Sec 18-T29N-R11W NE/4 Sec 19-T29N-R11W
DUGAN PRODUCTION CORP	PO BOX 420	FARMINGTON	NM	87499	OFFSET OPERATOR	SW/4 Sec 18-T29N-R11W

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AFFIDAVIT

Adam G. Rankin, attorney in fact and authorized representative of Hilcorp Energy Company, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Application has been provided under the notice letters and proof of receipts attached hereto.


Notary Public

August 26, 2021

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. B
Submitted by: **Hilcorp Energy Company**
Hearing Date: July 11, 2019
Case # 20639



June 21, 2019

VIA CERTIFIED MAIL
CERTIFIED RECEIPT REQUESTED**TO: AFFECTED PARTIES**

Re: Application of Hilcorp Energy Company for an Exception to the Well Density Requirements of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool, San Juan County, New Mexico.

Ladies & Gentlemen:

This letter is to advise you that Hilcorp Energy Company has filed the enclosed application with the New Mexico Oil Conservation Division. A hearing has been requested before a Division Examiner on July 11, 2019 and the status of the hearing can be monitored through the Division's website at <http://www.emnrd.state.nm.us/ocd/>. Division hearings will commence at 8:15 a.m. in Porter Hall at the Oil Conservation Division's Santa Fe Offices located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 19.15.4.13.B to file a Pre-hearing Statement four business days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this matter, please contact Brad Pearson at (713) 289-2793.

Sincerely,

Adam G. Rankin

ATTORNEY FOR HILCORP ENERGY COMPANY

13093504_v1

POSTAL DELIVERY REPORT
 HEC / HANLEY W M 1 F
 CASE NO. 20639

TrackingNo	CustomField1	TransactionDate	ToCompanyName	ToName	DeliveryAddress	AddressLine 2	City	State	Zip	USPS_Status
9414810898765037642398	66558 - Hanley WM 1F - 3	06/20/2019		DUGAN PRODUCTION CORP	PO Box 420		Farmington	NM	87499-0420	Your item was delivered at 1:18 pm on June 25, 2019 in FARMINGTON, NM 87401.
9414810898765037642381	66558 - Hanley WM 1F - 2	06/20/2019		ENDURING RESOURCES IV LLC	1050 17th St Ste 2500		Denver	CO	80265-2080	Your item was delivered to the front desk, reception area, or mail room at 12:27 pm on June 24, 2019 in DENVER, CO 80202.
9414810898765037642374	66558 - Hanley WM 1F - 1	06/20/2019		SOUTHLAND ROYLATY COMPANY LLC	400 W 7th St		Ft Worth	TX	76102-4701	Your item has been delivered to an agent at 9:12 am on June 24, 2019 in FORT WORTH, TX 76102.

AFFIDAVIT OF PUBLICATION

Ad No.
0001289412

HOLLAND AND HART
PO BOX 2208


SANTA FE NM 87504

I, being duly sworn say: THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the State of New Mexico for publication and appeared in the internet at The Daily Times web site on the following days(s):

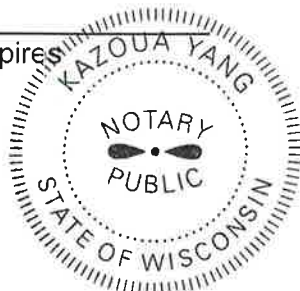
06/26/19


Legal Clerk

Subscribed and sworn before me this
26th of June 2019.


State of WI, County of Brown
NOTARY PUBLIC

11/9/22
My Commission Expires



Ad#:0001289412
P O : Hubbard
of Affidavits :0.00

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

The State of New Mexico through its Oil Conservation Division hereby gives notice pursuant to law and the Rules and Regulations of the Division of the following public hearing to be held at 8:15 A.M. on **July 11, 2019**, in the Oil Conservation Division Hearing Room at 1220 South St. Francis, Santa Fe, New Mexico, before an examiner duly appointed for the hearing. If you are an individual with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or any other form of auxiliary aid or service to attend or participate in the hearing, please contact: Florene Davidson at 505-476-3458 or through the New Mexico Relay Network, 1-800-659-1779 by **July 1, 2019**. Public documents, including the agenda and minutes, can be provided in various accessible forms. Please contact Florene Davidson if a summary or other type of accessible form is needed.

STATE OF NEW MEXICO TO:
All named parties and persons
having any right, title, interest
or claim in the following case
and notice to the public.

(NOTE: All land descriptions herein refer to the New Mexico Principal Meridian whether or not so stated.)

TO: ALL WORKING INTEREST OWNERS IN THE SUBJECT SPACING UNIT AND OFFSETTING OPERATORS OR LEASED MINERAL INTEREST OWNERS, INCLUDING: SOUTHLAND ROYALTY COMPANY LLC, ENDURING RESOURCES IV LLC, DUGAN PRODUCTION CORP.

CASE 20639: Application of Hilcorp Energy Company for an Exception to the Well Density Requirements of the Special Rules and Regulations of the Blanco-Mesaverde Gas Pool, San Juan County, New Mexico. Applicant in the above-styled cause seeks an order for an exception to the well density requirements of Rule I.B of the Special Rules and Regulations for the Blanco-Mesaverde Gas Pool (72319), San Juan County, New Mexico, to permit it to complete and simultaneously produce two Mesaverde gas wells in the same non-standard 160-acre, more or less, spacing and proration unit, with two wells in the same quarter section. Hilcorp further seeks approval for the proposed location of the **Hanley W M 1F** (API No. 30-045-34555) in the Mesaverde formation with a surface location in Unit N and a bottom-hole location in Unit L within the SW/4 of Section 18, Township 29 North, Range 10 West, NMPM, San Juan County, New Mexico, and authorization to simultaneously complete and

produce the **P rley W M 1F** from the Blanco-Mesaverde Gas Pool. Said area is located approximately 3 miles east of Bloomfield, NM.

Legal No. 1289412 published in The Daily Times on June 26, 2019.

**STATE OF NEW MEXICO
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SAN JUAN COUNTY, NEW MEXICO.**

CASE NO. 20639

AFFIDAVIT OF TYLER TEYKL IN SUPPORT OF CASE NO. 20639

Tyler Teykl, being of lawful age and duly sworn, declare as follows:

1. My name is Tyler Teykl. I work for Hilcorp Energy Company (“Hilcorp”) as a reservoir engineer.
2. I have previously testified before the New Mexico Oil Conservation Division as an expert in reservoir engineering. My credentials as a reservoir engineer have been accepted by the Division and made a matter of record.
3. I am familiar with the application filed by Hilcorp in this case and have conducted an engineering study of the subject area and of the Blanco-Mesaverde Gas Pool.
4. As with Hilcorp’s prior applications for well density exceptions in the Blanco-Mesaverde Gas Pool, I used a decline curve analysis of existing wells to estimate ultimate recoveries for the subject spacing unit under the existing well density. I then compared the estimated ultimate gas recoveries against log-derived volumetric calculations for the original gas in place with the cumulative gas production in the spacing unit. Using this approach, we identified areas, including the subject spacing unit, that have substantial remaining recoverable

gas and lower-than-expected gas recoveries where additional well bores or well completions are necessary to adequately drain remaining gas reserves.

5. **Exhibit C-1** contains information relating to the subject spacing unit and the **Hanley W M 1F** (API No. 30-045-34555) within the SW/4 of Section 18, Township 29 North, Range 10 West, which is the well Hilcorp proposes for simultaneous dedication within the Blanco-Mesaverde Gas Pool in this application. It is currently producing within the Dakota formation. It will be the third Mesaverde completion in the quarter section in the spacing unit. I anticipate that it will help drain the area to the west.

6. **Exhibit C-2** is a basin-wide map reflecting Hilcorp's calculations for original gas in place across the Blanco-Mesaverde Gas Pool. The warmer colors represent areas where there is more original gas in place. The cooler colors indicate areas where there is less original gas in place. The red star indicates the location of the subject well in an area where we calculate moderately high volumes of original gas in place.

7. **Exhibit C-3** is a map depicting the calculated estimated ultimate recovery (EUR) from the Blanco-Mesaverde Gas Pool and drainage radius. The larger radius circles reflect wells with higher EURs and larger drainage areas. The red star identifies the location of the subject well where there is relatively low EURs and the drainage radii are smaller.

8. **Exhibit C-4** is a map depicting calculated remaining recoverable gas. The cooler colors indicate areas where there is relatively less remaining recoverable gas. The warmer colors reflect areas where there is relatively more remaining recoverable gas. The red star identifies the location of the subject well in an area where we calculate that there is relatively considerable remaining recoverable gas and relatively low EURs under the existing well density.

9. **Exhibit C-5** is a table that supports this volumetric analysis. The first column titled "Volumetric OGIP" reflects the calculated volumetric original gas in place on a quarter section, section, and nine-section area basis around the subject spacing unit. The column titled "Section Equivalent OGIP" shows the estimated gas in place to show that the estimates are consistent across the area. The column titled "CTD/RF%" shows the cumulative gas production to date on a quarter section, section, and nine-section area basis and the calculated recovery factor. The column titled "Remaining GIP" shows the estimated remaining gas in place on a quarter section, section, and nine-section area basis. The last column titled "EUR/RF%" shows the estimated ultimate gas recovery and recovery factor calculated on a quarter section, section, and nine-section area basis.

10. I would expect recovery factors of approximately 70-80% in a gas pool of this type. The relatively low recovery factors in Exhibit C-5 indicate that this area is not being sufficiently drained by the existing wells in the subject spacing unit under the existing well density and that additional well bores, or completions, are necessary to adequately drain the Blanco-Mesaverde Gas Pool in this area.

11. Approval of Hilcorp's application is therefore necessary to drain unrecovered gas reserves that will otherwise be left in place under the existing well density.

12. **Exhibit C-6** is a well bore diagram for the subject well. It provides the most current information known regarding the status and construction of the well, as well as the location and condition of cement within the wellbore. Hilcorp will separately seek administrative approval from the Division's Aztec District Office for authorization to recompleting this well in advance of undertaking any recompletion operations.

13. In my opinion, granting this application will not impair the Blanco-Mesaverde Gas Pool, and will be in the interest of conservation, the prevention of waste and will protect correlative rights.

14. Exhibits C-1 through C-6 were prepared by me or under my direction and supervision.

FURTHER AFFIANT SAYETH NAUGHT.

Tyler Teykl
Tyler Teykl

STATE OF TEXAS)
COUNTY OF Harris)

SUBSCRIBED and SWORN to before me this 3rd day of July, 2019 by Tyler Teykl.

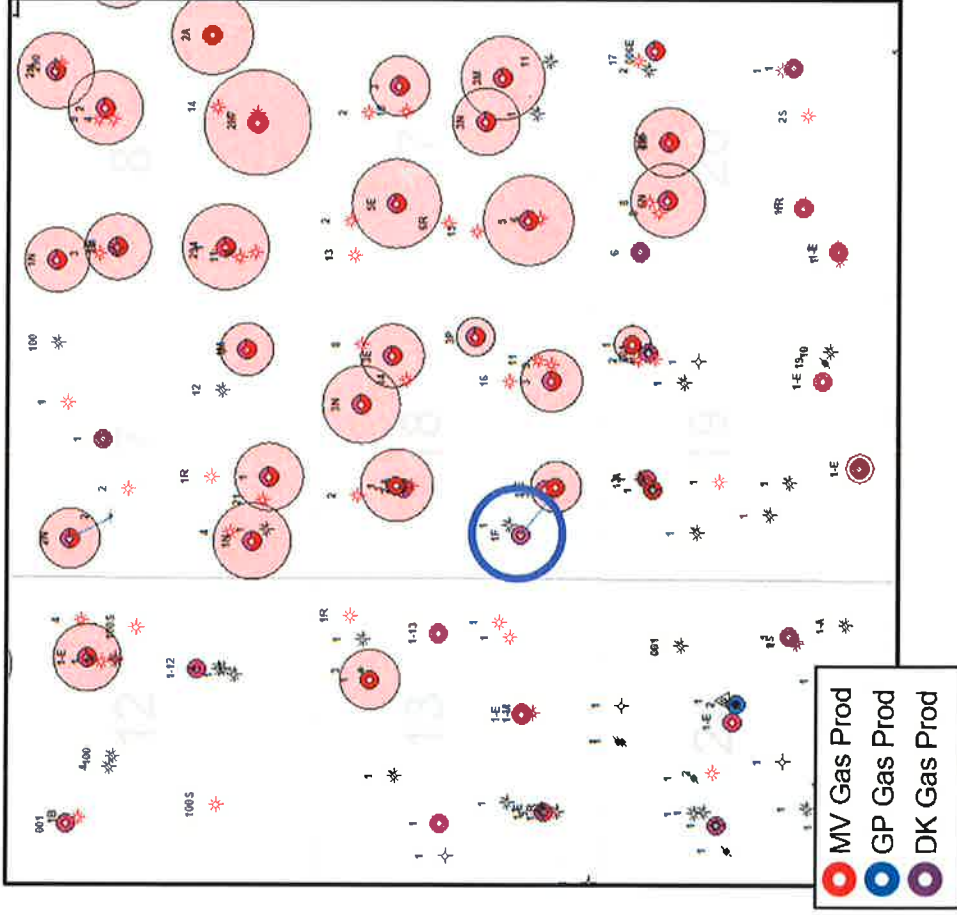
[Signature]
NOTARY PUBLIC

My Commission Expires:

02/08/2023



Hanley W M 1F

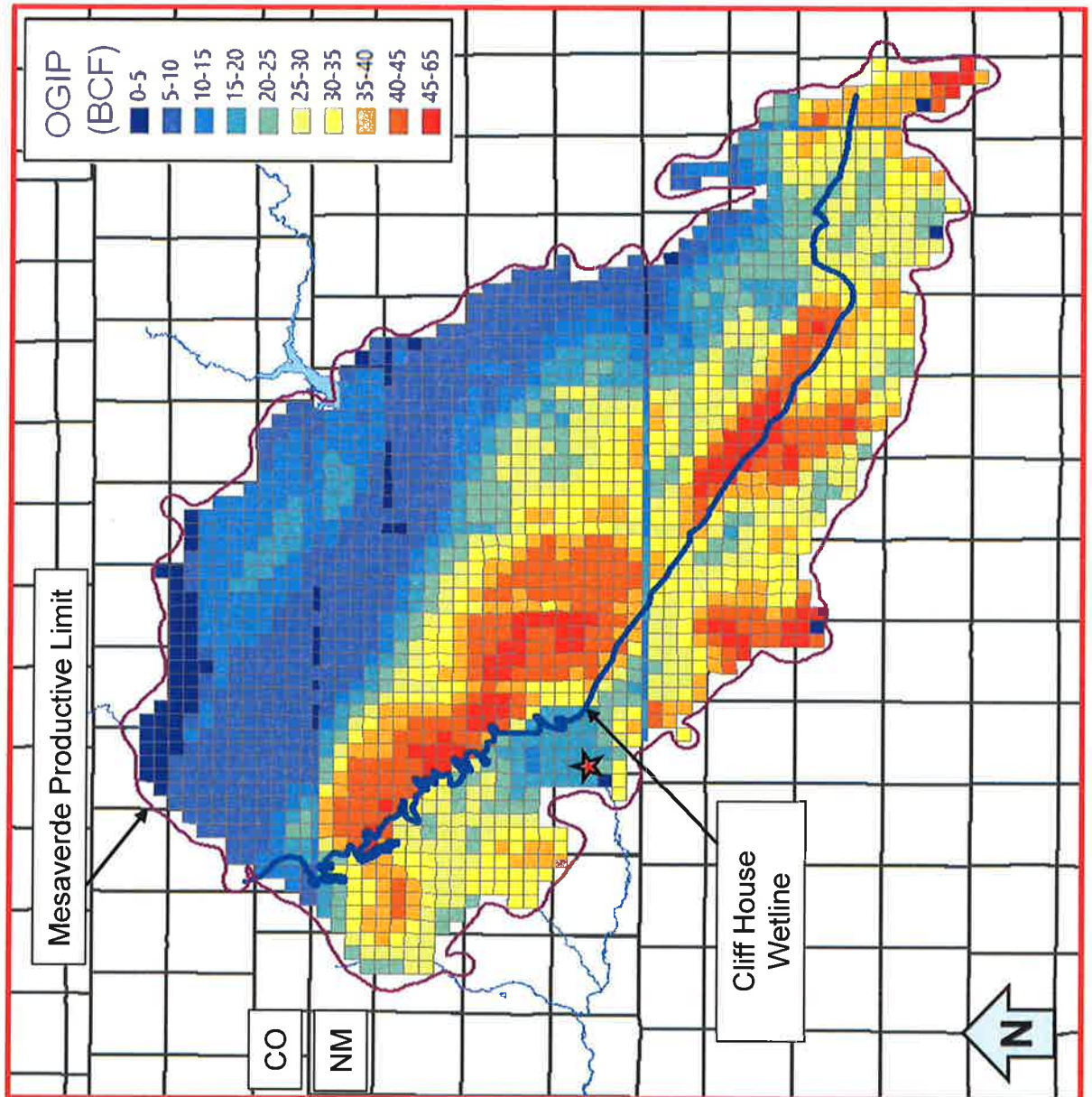


Well Specifics

- SW18 29-10 3004534555 2008 drill
- 3rd MV completion in 1/2 section
- 1100' from nearest MV producer
- Help drain area to the west
- Complete MV in 1-2 stages

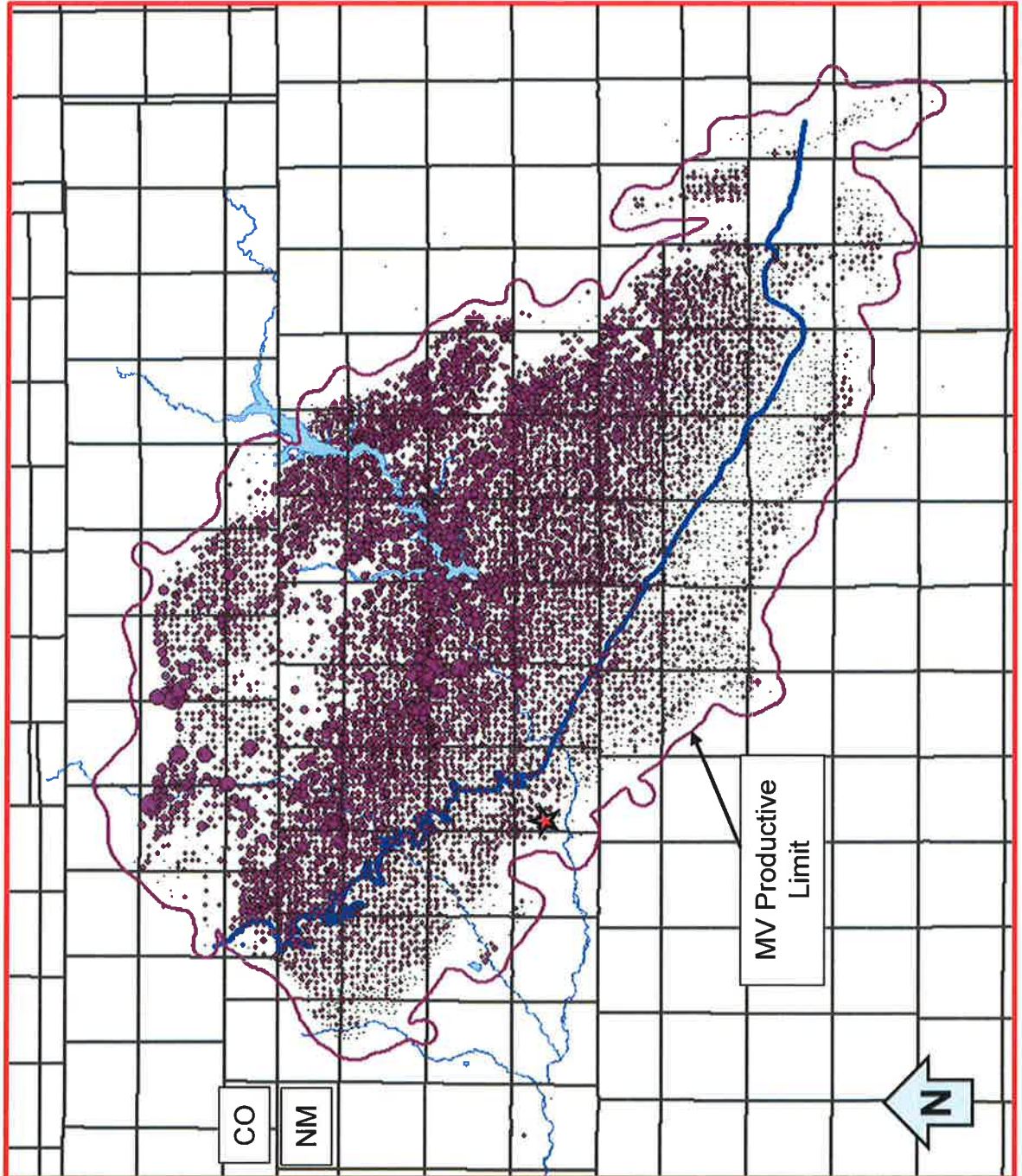


MV Original Gas In Place



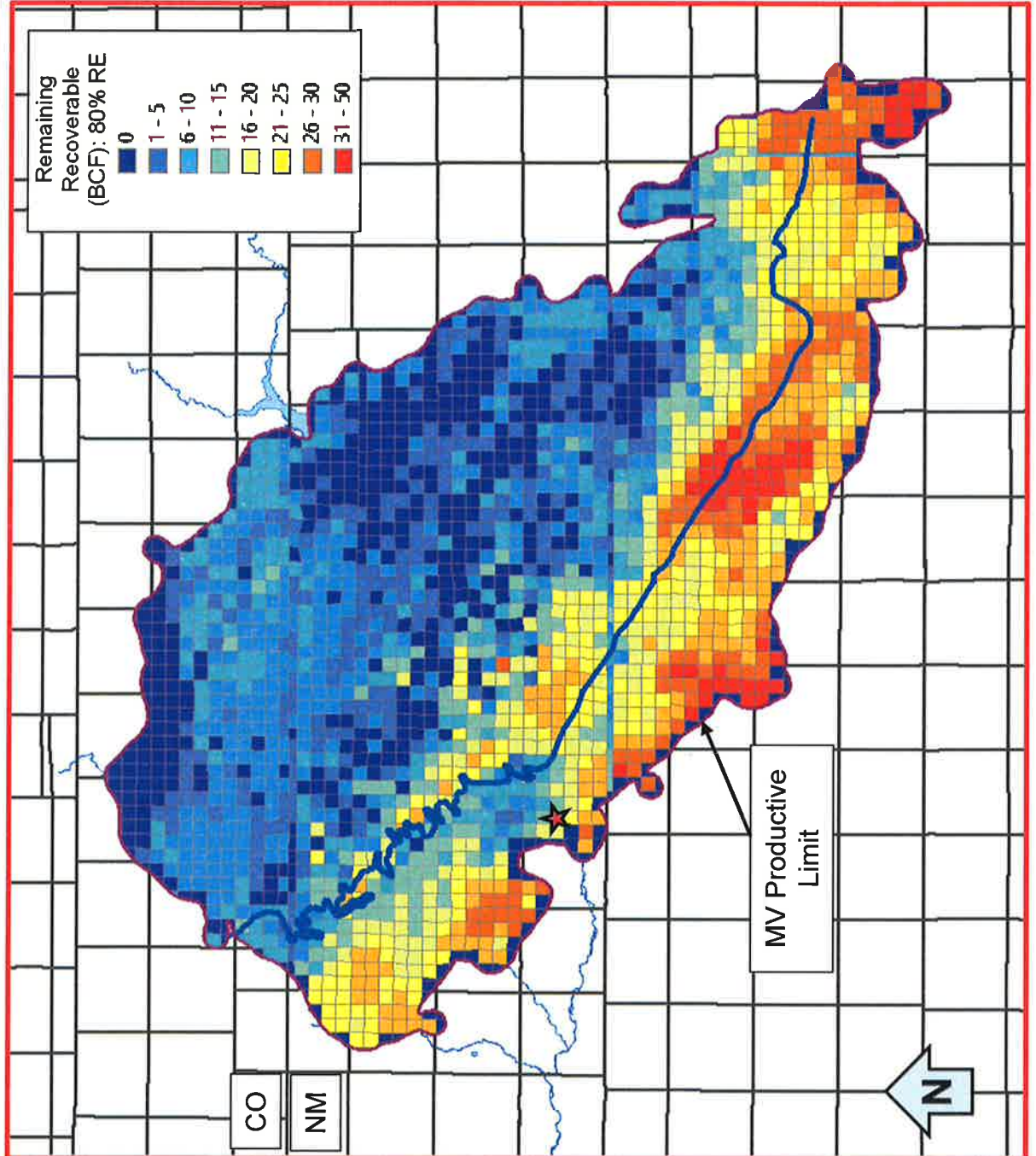


MV EUR and Drainage Radius





MV Remaining Recoverable Gas



Hanley W M 1F



Reference Area	Volumetric OGIP	Section Equivalent OGIP	CTD / RF%	Remaining GIP	EUR / RF%
Qtr Section	4.54 Bcf	18.2 Bcf	0.41 Bcf / 9%	4.13 Bcf	1.01 Bcf / 22%
Section	18.3 Bcf	18.3 Bcf	2.7 Bcf / 15%	15.6 Bcf	4.2 Bcf / 23%
9 Section	211 Bcf	23.5 Bcf	110 Bcf / 52%	101 Bcf	145 Bcf / 69%

- Remaining Gas in Place in Quarter Section of 4.1 Bcf
- Cumulative Recovery Factor to Date 9% and 15% in the Quarter Section and Section, respectively
- Considerable gas remaining in area with opportunity to recover additional volumes utilizing existing wellbore



Hanley W M 1F - Schematic

