

**BEFORE THE OIL CONSERVATION DIVISION
EXAMINER HEARING MAY 2, 2019**

CASE No. 20426

CLAYTON 0001 WELL



**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. 20426

AFFIDAVIT OF ROB CARLSON IN SUPPORT OF CASE NO. 20426

I, Rob Carlson, being of lawful age and duly sworn, declare as follows:

1. My name is Rob Carlson. 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 three Mesaverde gas wells in the same quarter section, for a total of five Mesaverde gas wells within the same standard 320-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 standard 320-acre, more or less, spacing and proration unit in the Blanco-Mesaverde Gas Pool comprised of the S/2 of Section 2, Township 30 North, Range 12 West, San Juan County, New Mexico, in which the following four wells are currently completed and producing:

- a. Clayton 002A Well (API No. 30-045-25911) Sec. 2, T30N, R12W (Unit P);
- b. Clayton 002 Well (API No. 30-045-25910), Sec. 2, T30N, R12W (Unit K);
- c. Clayton 001B Well (API No. 30-045-31341), Sec. 2, T30N, R12W (Unit L); and
- d. Clayton 002C Well (API No. 30-045-31014), Sec. 2, T30N, R12W (Unit J).

8. Hilcorp proposes to simultaneously dedicate and produce the following well within the same standard spacing and proration unit, at the following location:

- a. **Clayton 001 Well** (API No. 30-045-09822) Sec. 2, T30N, R12W (Unit N).

9. This will be the fifth well within the same spacing unit with three wells in the same quarter section, exceeding well density limits imposed by the Special Rules.

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 **Clayton 001 Well** (API No. 30-045-09822) within the S/2 of Section 2, Township 30 North, Range 12 West,

permitting the total number of wells dedicated and producing within this spacing and proration unit to five, with three wells in the same quarter section.

11. The proposed simultaneous dedication of the **Clayton 001 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, within the S/2 of Section 2, Township 30 North, Range 12 West, to which the well will be simultaneously dedicated.

15. Exhibit A-1 also identifies the locations of the existing Mesaverde wells as gray circles, as well as the **Clayton 001 Well** as a gray triangle.

16. Exhibit A-1 also depicts the notice area comprised of the offsetting spacing units, which is the area within the gray dashed line surrounding the subject spacing unit outlined in green. For some offsetting spacing units, Hilcorp is the operator in which Hilcorp has provided notice to the affected parties where applicable. Where Hilcorp is not the operator, Hilcorp provided notice to the operator of the offsetting spacing unit.

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. Most parties were locatable. For those unlocatable parties, notice was provided via newspaper publication.

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.

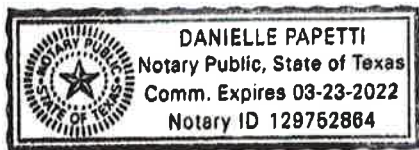
19. Exhibits A-1 and A-2 were prepared by me or under my direction and supervision.

FURTHER AFFIANT SAYETH NAUGHT.


Rob Carlson

STATE OF TEXAS)
)
COUNTY OF HARRIS)

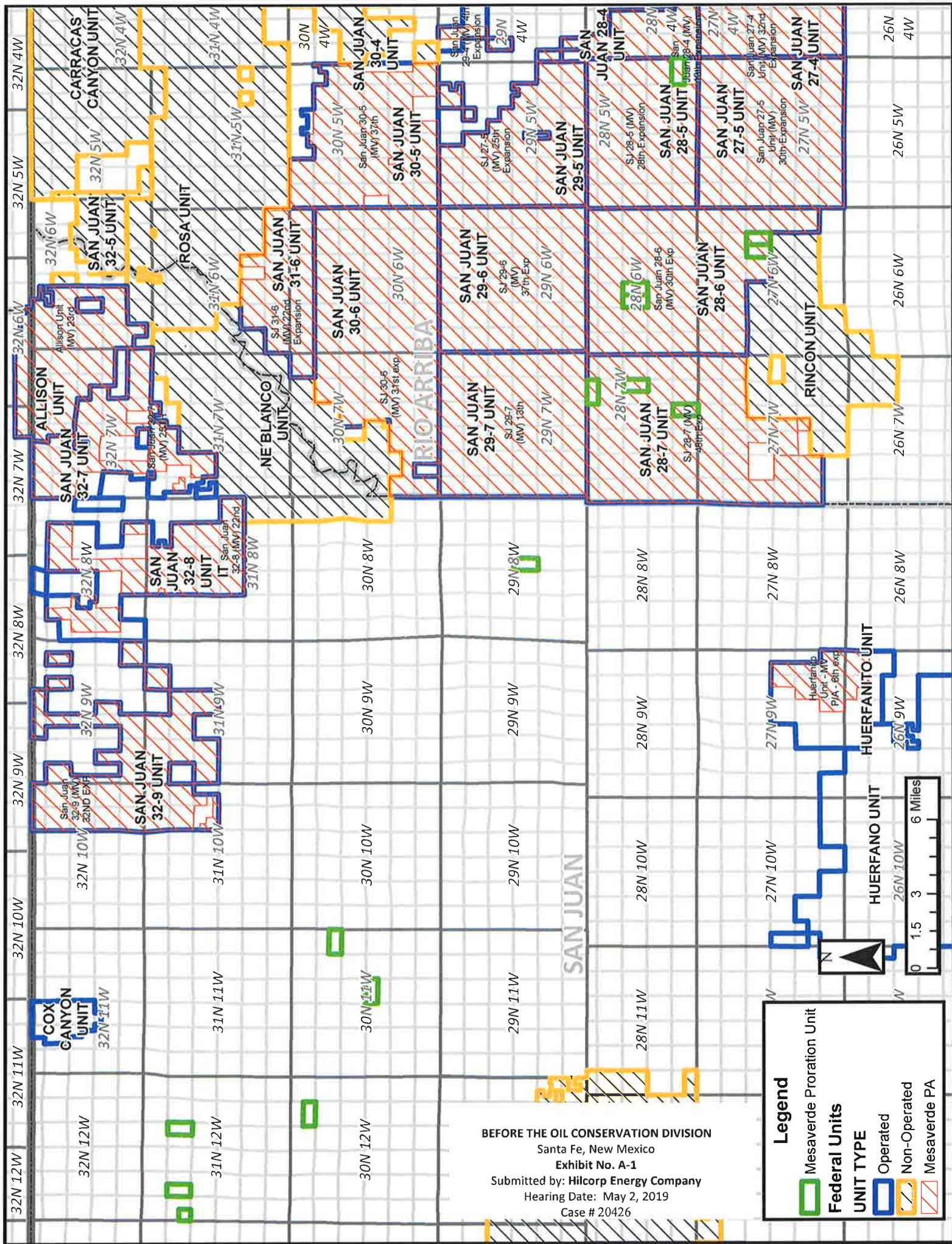
SUBSCRIBED and SWORN to before me this 30 day of April, 2019 by Rob Carlson.

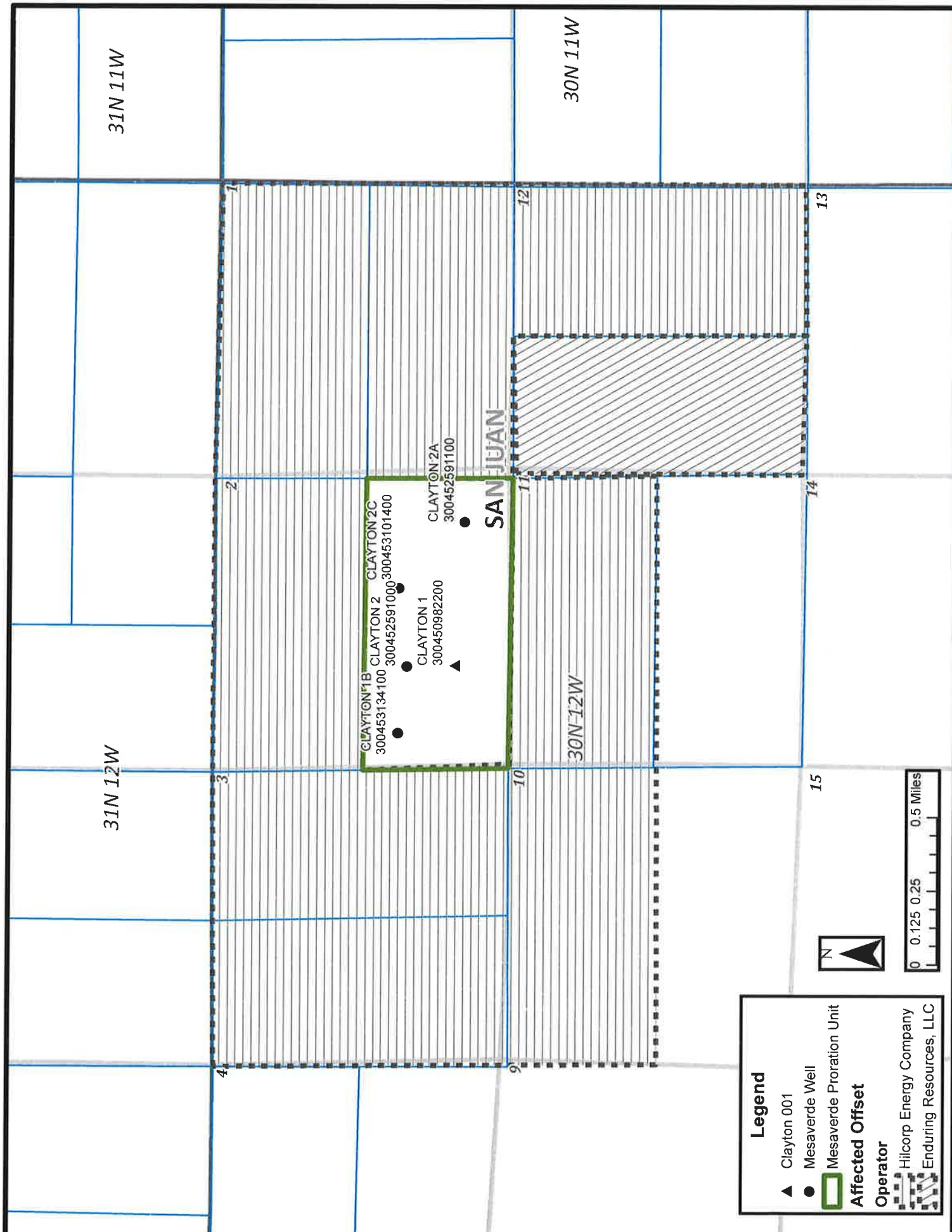



NOTARY PUBLIC

My Commission Expires:

03-23-2022





Legend

- ▲ Clayton 001
- Mesaverde Well
- ▨ Mesaverde Proration Unit
- ▭ Affected Offset

Operator

Hilcorp Energy Company
Enduring Resources, LLC



CLAYTON 001 (30-045-09822)

Owner Name	Address 1	Address 2	City	State	Zip
BARBARA KAY KULLAS	ROXBOROUGH PARK 6506 WARRIORS RUN		LITTLETON	CO	80125-9060
BP AMERICA PRODUCTION COMPANY	Attn: Craig Ferguson PO BOX 309	737 N. Eldridge Parkway	Houston	TX	77079
CANDACE L COX	1213 WHITE HALL RD		CONCORD	MA	01742
FLOYD W HURT JR	5500 OLD CLARKSVILLE RD.		KESWICK	VA	22947
GEORGIA LEE KELTON			PARIS	TX	75462-7800
H D OLIVER	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP	JEAN J BLEAKLEY TRUSTEE 8523 THACKERY ST		DALLAS	TX	75225
JEAN J BLEAKLEY TRUST MARCH 17 1989	209 ALTONDALE AVE		CHARLOTTE	NC	28207
LAURIE HURT JOHNSTON	M DOUGLAS TODD TRUSTEE 3950 27TH RD		ARLINGTON	VA	22207-5242
M DOUGLAS TODD TRUST DTD 11 26 2003					
O NELLIE TROXEL	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP (SBT)	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP (SIBT)	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP (SBT)	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP (SIBT)	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002
SPEEREX LIMITED PARTNERSHIP	PO BOX 1363		Houston	TX	77002
TERRY E BOLACK	DBA LANFORD LLC PO BOX 90428	MOUNT PLEASANT	SC	29465-1363	
TOMMY BOLACK MINERALS CORP	3901 BLOOMFIELD HWY		ALBUQUERQUE	NM	90428
Hilcorp San Juan, LP	1111 Travis Street		FARMINGTON	NM	87401
Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002
Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002
Enduring Resources IV LLC	1050 17th Street	Suite 2500	Denver	CO	80265
WPC OIL & GAS LP	4040 NORTH CENTRAL EXPWY SUITE 750 LB #6		DALLAS	TX	75204
Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. A-2

Submitted by: Hilcorp Energy Company

Hearing Date: May 2, 2019

Case # 20426

**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 NOS. 20426-20431, 20440

AFFIDAVIT

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

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 Applications have been provided under the notice letters and proof of receipts attached hereto.



Adam G. Rankin

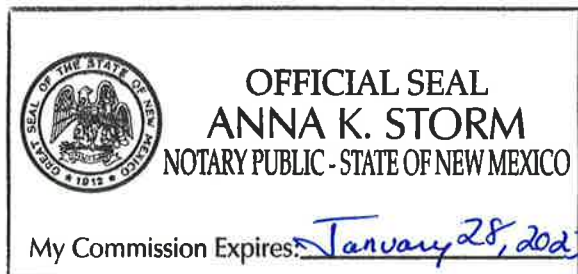
SUBSCRIBED AND SWORN to before me this 1st day of May 2019 by Adam G. Rankin.



Notary Public

My Commission Expires:

January 28, 2023



HOLLAND & HART^{LLP}



Adam G. Rankin
Phone (505) 988-4421
Fax (505) 983-6043
agrarkin@hollandhart.com

April 12, 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 May 2, 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 Rob Carlson at (832) 839-4596.

Sincerely,

Adam G. Rankin

ATTORNEY FOR HILCORP ENERGY COMPANY

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. B-1
Submitted by: **Hilcorp Energy Company**
Hearing Date: May 2, 2019
Case # 20426



Shipment Confirmation Acceptance Notice

A. Mailer Action

Note to Mailer: The labels and volume associated to this form online, **must** match the labeled packages being presented to the USPS® employee with this form.

Clayton 001 20426
CM# HEC/OCD 93904.0003

Shipment Date: 04/09/2019

Shipped From:

Name: HOLLAND & HART LLP

Address: 110 N GUADALUPE ST # 1

City: SANTA FE

State: NM ZIP+4® 87501

Type of Mail	Volume
Priority Mail Express®*	
Priority Mail®	0
First-Class Package Service®	
Returns	
International*	
Other	13
Total	13

*Start time for products with service guarantees will begin when mail arrives at the local Post Office™ and items receive individual processing and acceptance scans.

B. USPS Action

Note to RSS Clerk:

1. Home screen > Mailing/Shipping > More
2. Select Shipment Confirm
3. Scan or enter the barcode/label number from PS Form 5630
4. Confirm the volume count message by selecting Yes or No
5. Select Pay and End Visit to complete transaction

USPS EMPLOYEE: Please scan upon pickup or receipt of mail.
Leave form with customer or in customer's mail receptacle.

USPS SCAN AT ACCEPTANCE



9275 0901 1935 6200 0013 7652 85





Firm Mailing Book For Accountable Mail

Name and Address of Sender Holland & Hart LLP 110 N Guadalupe St # 1 Santa Fe NM 87501		Check type of mail or service <input type="checkbox"/> Adult Signature Required <input type="checkbox"/> Priority Mail Express <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Collect on Delivery (COD) <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Insured Mail <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Priority Mail <input type="checkbox"/> Restricted Delivery										Affix Stamp Here (if issued as an international certificate of mailing or for additional copies of this receipt). Postmark with Date of Receipt.													
USPS Tracking/Article Number		Addressee (Name, Street, City, State, & ZIP Code™)										Postage	(Extra Service) Fee	Handling Charge	Actual Value if Registered	Insured Value	Due Sender if COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee	
1. 9214 8901 9403 8381 2293 51		BARBARA KAY KULLAS ROXBOROUGH PARK 6506 WARRIORS RUN LITTLETON CO 80125-9060										0.49	3.50								1.60				
2. 9214 8901 9403 8381 2293 68		BP AMERICA PRODUCTION COMPANY Attn: Craig Ferguson 737 N Eldridge Parkway Houston TX 77079										0.49	3.50							1.60					
3. 9214 8901 9403 8381 2293 75		CANDACE L COX PO BOX 309 CONCORD MA 01742										0.49	3.50							1.60					
4. 9214 8901 9403 8381 2293 82		FLOYD W HURT JR 1213 WHITE HALL RD KESWICK VA 22947										0.49	3.50							1.60					
5. 9214 8901 9403 8381 2293 99		GEORGIA LEE KELTON 5500 OLD CLARKSVILLE RD PARIS TX 75462-7800										0.49	3.50							1.60					
6. 9214 8901 9403 8381 2294 05		JEAN J BLEAKLEY TRUST MARCH 17 1989 JEAN J BLEAKLEY TRUSTEE 6523 THACKERY ST DALLAS TX 75225										0.49	3.50							1.60					
7. 9214 8901 9403 8381 2294 12		LAURIE HURT JOHNSTON 209 ALTONDALE AVE CHARLOTTE NC 28207										0.49	3.50							1.60					
8. 9214 8901 9403 8381 2294 29		M DOUGLAS TODD TRUST DTD 11 26 2003 M DOUGLAS TODD TRUSTEE 3950 27TH RD ARLINGTON VA 22207-5242										0.49	3.50							1.60					
Total Number of Pieces Listed by Sender 13		Postmaster, Per (Name of receiving employee)																							



Firm Mailing Book For Accountable Mail

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USPS Tracking/Article Number	Addressee (Name, Street, City, State, & ZIP Code™)	Postage	(Extra Service) Fee	Handling Charge	Actual Value if Registered	Insured Value	Due Sender if COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee
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10. 9214 8901 9403 8381 2294 43	TERRY E BOLACK DBA LANFORD LLC PO BOX 90428 ALBUQUERQUE NM 80428	0.49	3.50								1.60			
11. 9214 8901 9403 8381 2294 50	TOMMY BOLACK MINERALS CORP 3901 BLOOMFIELD HWY FARMINGTON NM 87401	0.49	3.50								1.60			
12. 9214 8901 9403 8381 2294 67	ENDURING RESOURCES IV LLC 1050 17th Street Ste 2500 Denver CO 80265	0.49	3.50								1.60			
13. 9214 8901 9403 8381 2294 74	WPC OIL & GAS LP 4040 NORTH CENTRAL EXPWY SUITE 750 LB #6 DALLAS TX 75204	0.49	3.50								1.60			
Total Number of Pieces Listed by Sender 13		Total Number of Pieces Received at Post Office		Postmaster, Per (Name of receiving employee)										



Shipment Confirmation Acceptance Notice

A. Mailer Action

Note to Mailer: The labels and volume associated to this form online, **must** match the labeled packages being presented to the USPS® employee with this form.

Clayton - Bolack Update 20426
HEC/OCD 93904.0003

Shipment Date: 04/10/2019

Shipped From:

Name: HOLLAND & HART LLP

Address: 110 N GUADALUPE ST # 1

City: SANTA FE

State: NM ZIP+4® 87501

Type of Mail	Volume
Priority Mail Express®*	
Priority Mail®	0
First-Class Package Service®	
Returns	
International*	
Other	1
Total	1

*Start time for products with service guarantees will begin when mail arrives at the local Post Office™ and items receive individual processing and acceptance scans.

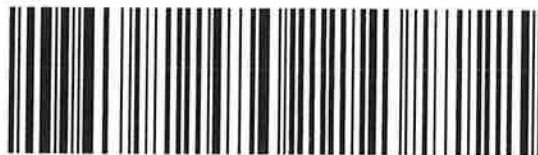
B. USPS Action

Note to RSS Clerk:

1. Home screen > Mailing/Shipping > More
2. Select Shipment Confirm
3. Scan or enter the barcode/label number from PS Form 5630
4. Confirm the volume count message by selecting Yes or No
5. Select Pay and End Visit to complete transaction

USPS EMPLOYEE: Please scan upon pickup or receipt of mail.
Leave form with customer or in customer's mail receptacle.

USPS SCAN AT ACCEPTANCE



9275 0901 1935 6200 0013 7806 08





Firm Mailing Book For Accountable Mail

Name and Address of Sender		Check type of mail or service		Affix Stamp Here (if issued as an international certificate of mailing or for additional copies of this receipt). Postmark with Date of Receipt.														
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1.	9214 8901 9403 8381 2680 53	TERRY E BOLACK DBA LANFORD LLC PO BOX 90428 ALBUQUERQUE NM 87199				0.49	3.50								1.60			
Total Number of Pieces Listed by Sender	1	Total Number of Pieces Received at Post Office				Postmaster, Per (Name of receiving employee)												

Barcode	Recipient	Status
9.21489E+21	BARBARA KAY KULLAS ROXBOROUGH PARK 6506 WARRIORS RUN LITTLETON CO 80125-9060	Delivered Signature Received
9.21489E+21	BP AMERICA PRODUCTION COMPANY Attn: Craig Ferguson 737 N Eldridge Parkway Houston TX 77079	In-Transit
9.21489E+21	CANDACE L COX PO BOX 309 CONCORD MA 01742	In-Transit
9.21489E+21	FLOYD W HURT JR 1213 WHITE HALL RD KESWICK VA 22947	Delivered Signature Received
9.21489E+21	GEORGIA LEE KELTON 5500 OLD CLARKSVILLE RD PARIS TX 75462-7800	Delivered Signature Received
9.21489E+21	JEAN J BLEAKLEY TRUST MARCH 17 1989 JEAN J BLEAKLEY TRUSTEE 8523 THACKERY ST DALLAS TX 75225	Delivered Signature Received
9.21489E+21	LAURIE HURT JOHNSTON 209 ALTONDALE AVE CHARLOTTE NC 28207	In-Transit
9.21489E+21	M DOUGLAS TODD TRUST DTD 11 26 2003 M DOUGLAS TODD TRUSTEE 3950 27TH RD ARLINGTON VA 22207-5242	Delivered Signature Received
9.21489E+21	SPEEREX LIMITED PARTNERSHIP PO BOX 1363 MOUNT PLEASANT SC 29465-1363	Delivered Signature Received
9.21489E+21	TERRY E BOLACK DBA LANFORD LLC PO BOX 90428 ALBUQUERQUE NM 80428	In-Transit
9.21489E+21	TOMMY BOLACK MINERALS CORP 3901 BLOOMFIELD HWY FARMINGTON NM 87401	Delivered Signature Received
9.21489E+21	ENDURING RESOURCES IV LLC 1050 17th Street Ste 2500 Denver CO 80265	Delivered Signature Received
9.21489E+21	WPC OIL & GAS LP 4040 NORTH CENTRAL EXPWY SUITE 750 LB #6 DALLAS TX 75204	Delivered Signature Received

HEC / Clayton 001
Update Address

Barcode	Recipient	Status
9.21489E+21	TERRY E BOLACK DBA LANFORD LLC PO BOX 90428 ALBUQUERQUE NM 87199	Delivered Signature Received

THE DAILY TIMES

AFFIDAVIT OF PUBLICATION

Ad No.
0001283237

HOLLAND AND HART
PO BOX 2208

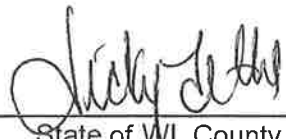
SANTA FE NM 87504

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):

04/16/19


Legal Clerk

Subscribed and sworn before me this
16th of April 2019.


State of WI, County of Brown
NOTARY PUBLIC


My Commission Expires

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. B-2
Submitted by: Hilcorp Energy Company
Hearing Date: May 2, 2019
Case # 20426



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 **May 2, 2019**, in the Oil Conservation Division Hearing Room at 1220 South St. Francis, Santa Fe, New Mexico, before an examiner duly appoint 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 **April 22, 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: BARBARA KAY KULLAS, HER HEIRS AND DEVISEES; BP AMERICA PRODUCTION COMPANY; CANDACE L. COX, HER HEIRS AND DEVISEES; FLOYD W. HURT, JR., HIS HEIRS AND DEVISEES; GEORGIA LEE KELTON, HER HEIRS AND DEVISEES; H. D. OLIVER, HIS HEIRS AND DEVISEES; JEAN J. BLEAKLEY TRUST MARCH 17, 1989, JEAN J. BLEAKLEY TRUSTEE; LAURIE HURT JOHNSTON, HER HEIRS AND DEVISEES; M. DOUGLAS TODD TRUST DTD 1126 20, M. DOUGLAS TODD TRUSTEE; O. NELLI TROXEL, HER HEIRS AND DEVISEES; SPEER EX LIMITED PARTNERSHIP; TERRY E. BOLACK, HIS HEIRS AND DEVISEES; TOMMY BOLACK MINERALS CORP ENDURING RESOURCES IV LLC; WPC OIL & GAS LP.

CASE 20426: 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 five Mesaverde gas wells in the same standard 320-acre, more or less, spacing and proration unit, with three wells in the same quarter section. Hilcorp further seeks approval for the proposed location of the **Clayton 001 Well** (API No. 30-045-09822) in the Mesaverde formation with a surface location in Unit N of the S/2 of Section 2, Township 30 North, Range 12 West, NMPM, San Juan County, New Mexico, and authorization to simultaneously complete and produce the **Clayton 001 Well** from the Blanco-Mesaverde Gas Pool. Said area is located approximately 5 miles west of Aztec, NM.

Legal No. 1283237 published in The Daily Times on April 16, 2019.

**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. 20426

AFFIDAVIT OF ALEX LIANG IN SUPPORT OF CASE NO. 20426

Alex Liang, being of lawful age and duly sworn, declare as follows:

1. My name is Alex Liang. 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 **Clayton 001 Well** (API No. 30-045-09822) within the S/2 of Section 2, Township 30 North, Range 12 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 south.

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.

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.

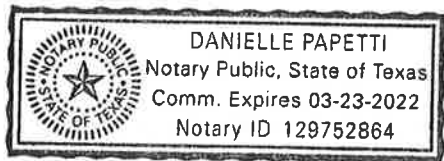
14. Exhibits C-1 through C-6 were prepared by me or under my direction and supervision.

FURTHER AFFIANT SAYETH NAUGHT.

Alex Liang
Alex Liang

STATE OF TEXAS)
COUNTY OF HARRIS)

SUBSCRIBED and SWORN to before me this 29 day of April, 2019 by Alex Liang.



Danielle Papetti
NOTARY PUBLIC

My Commission Expires:

03-23-2022

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 that is 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.

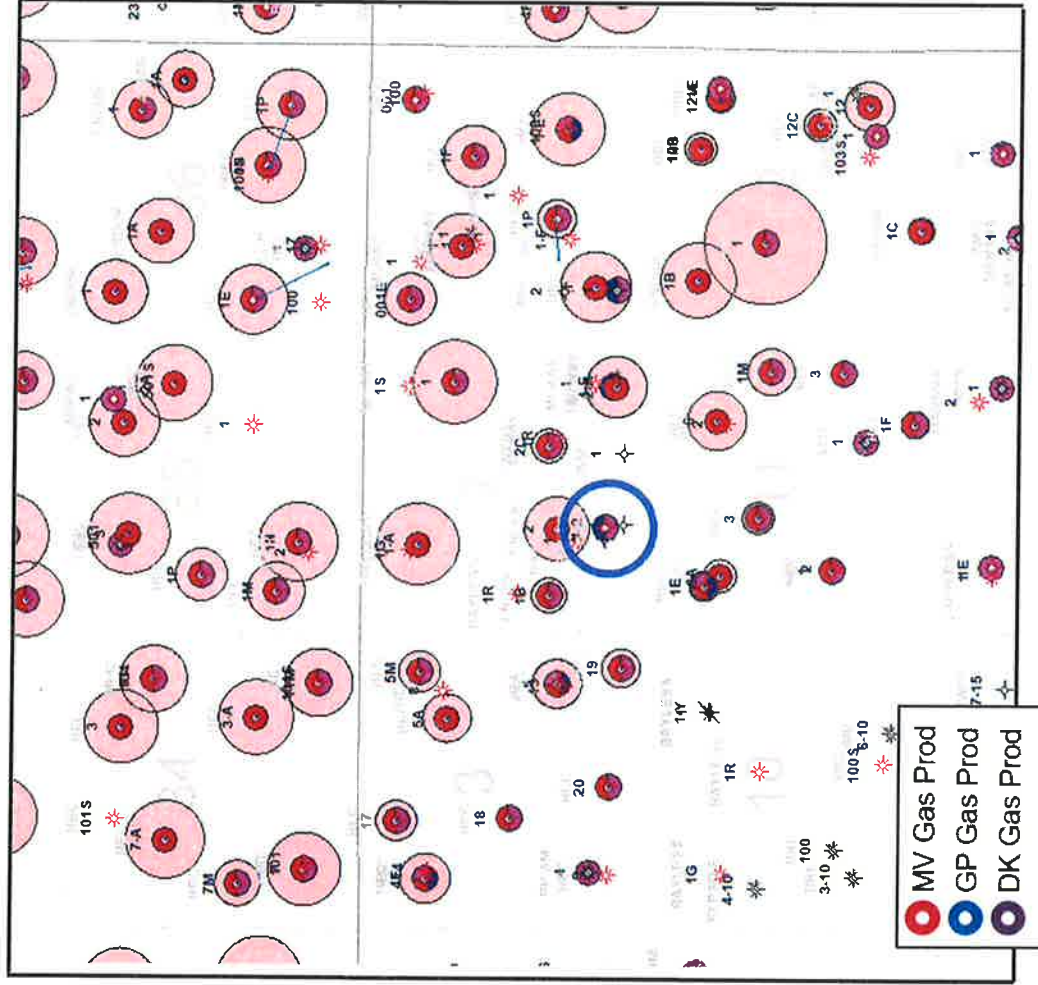
12. Exhibit C-6 is a well bore diagram for the subject well. It provides the most current information known regarding the status and construction of the well, as well as the location and condition of cement within the wellbore. Hilcorp will separately seek administrative approval from the Division's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

Clayton 1

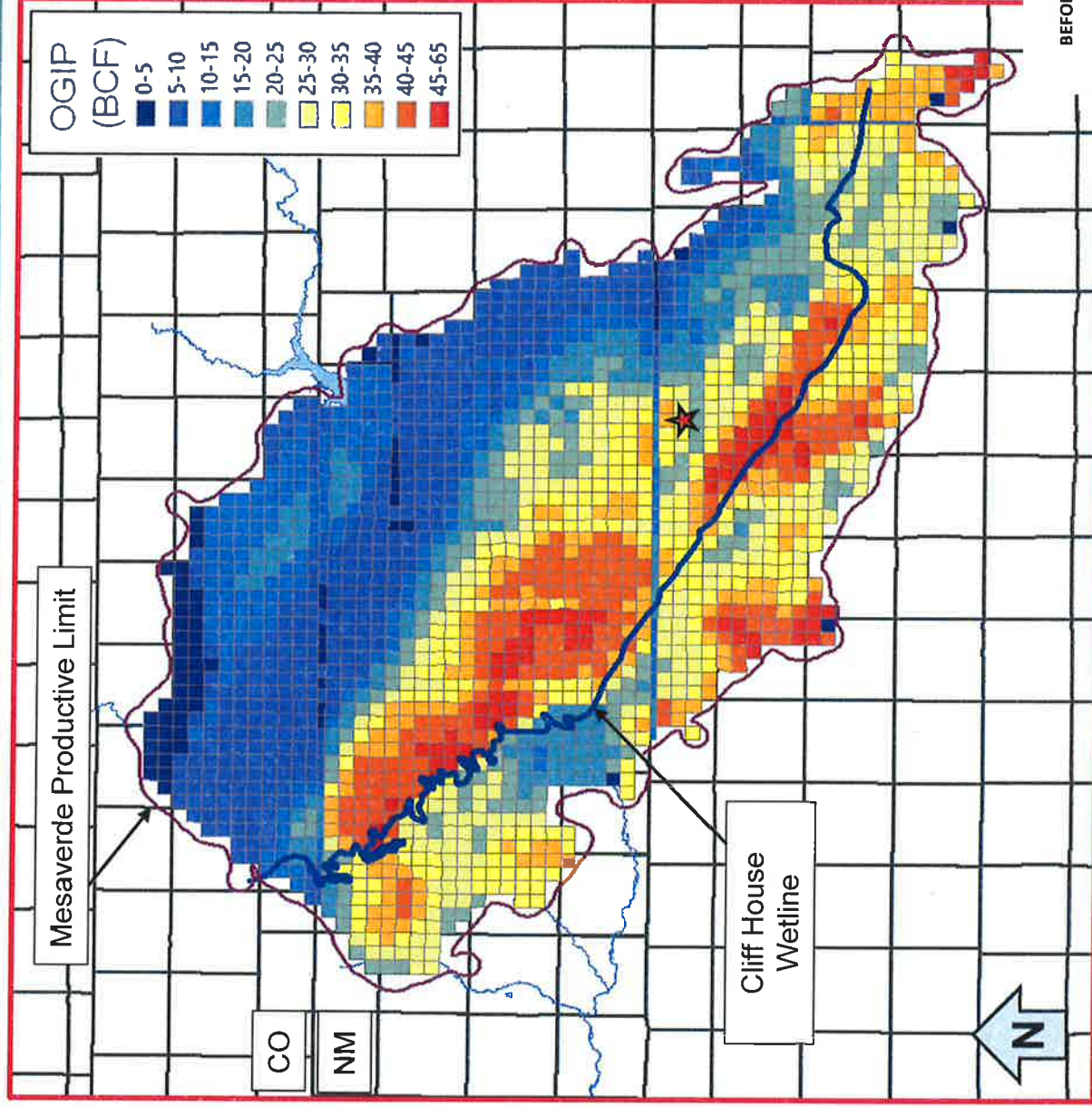


Well Specifics

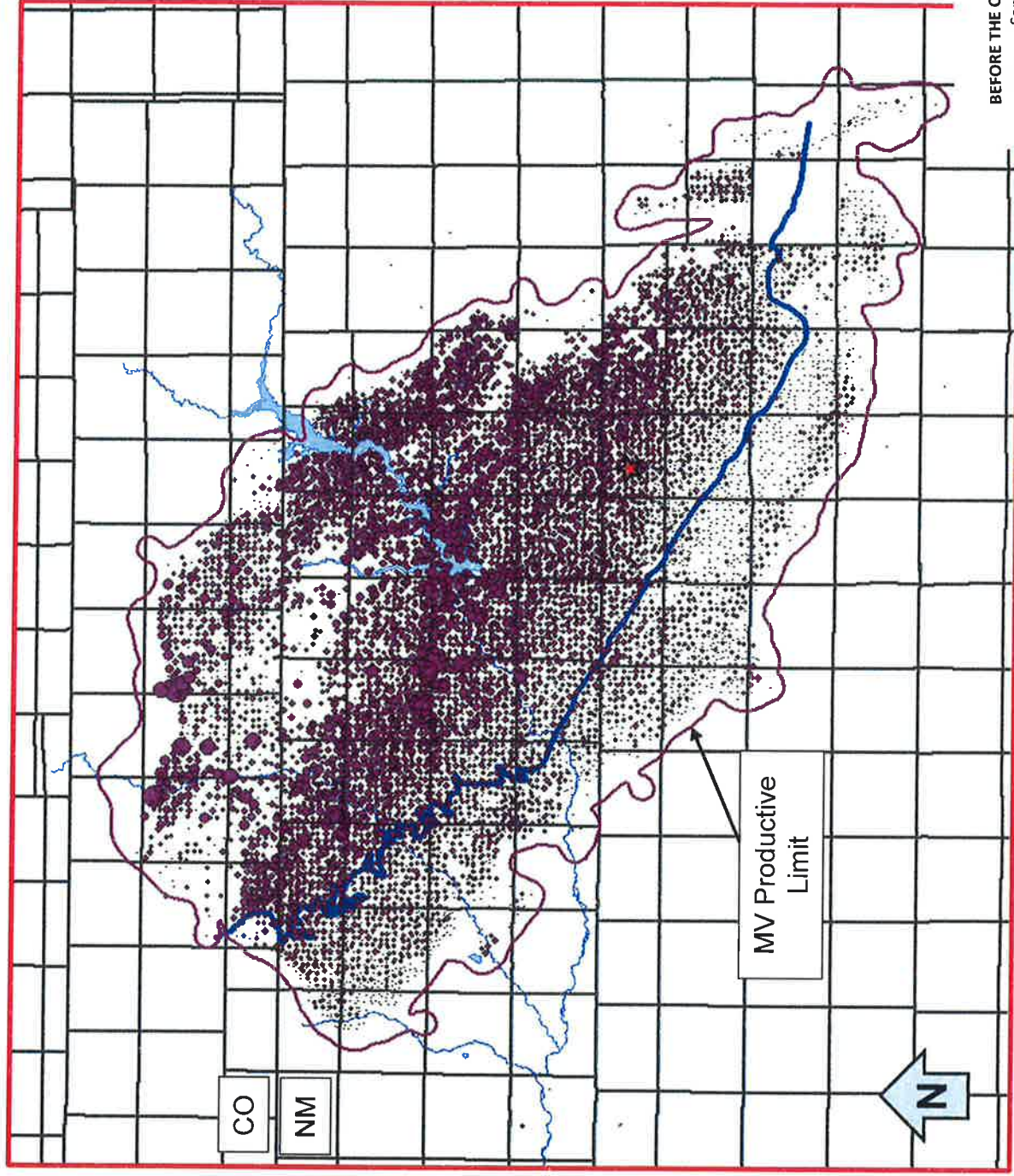
- SW02 30-12 3004509822 1960 drill
- 3rd MV completion in 1/4 section
- 875' from nearest MV producer
- Help drain area to the south
- Complete MV in 1-2 stages



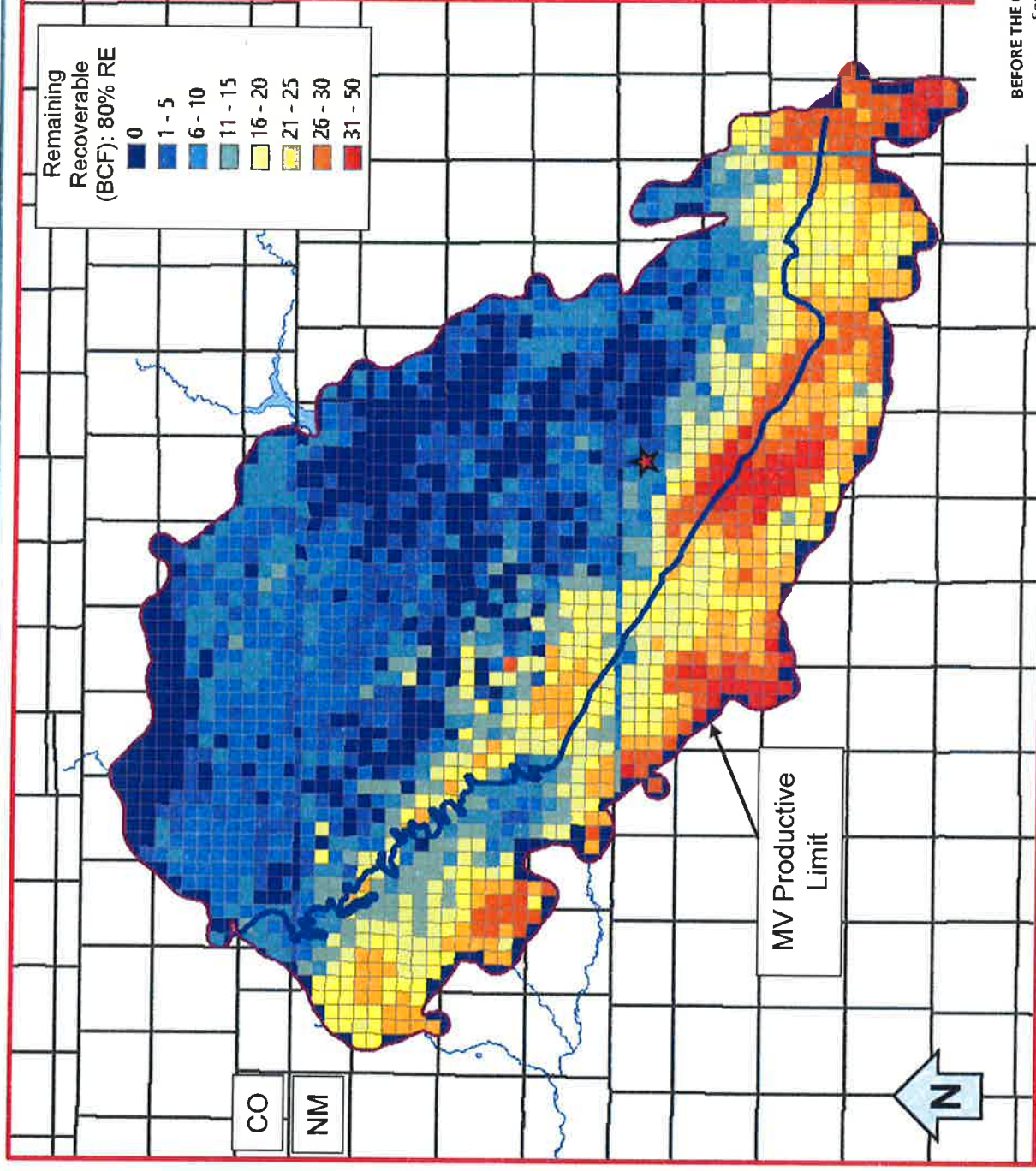
MV Original Gas In Place



MV EUR and Drainage Radius



MV Remaining Recoverable Gas



Clayton 1



Reference Area	Volumetric OGIP	Section Equivalent OGIP	CTD / RF%	Remaining GIP	EUR / RF%
Qtr Section	3.3 Bcf	13.2 Bcf	1.5 Bcf / 46%	1.8 Bcf	1.6 Bcf / 47%
Section	23.4 Bcf	23.4 Bcf	4.3 Bcf / 18%	19.1 Bcf	4.8 Bcf / 21%
9 Section	169.6 Bcf	18.8 Bcf	34.7 Bcf / 20%	134.9 Bcf	49.0 Bcf / 29%

- Remaining Gas in Place in Quarter Section of 1.8 Bcf
- Cumulative Recovery Factor to Date 46% and 18% in the Quarter Section and Section, respectively
- Considerable gas remaining in area with opportunity to recover additional volumes utilizing existing wellbore

[illegible]