

**BEFORE THE OIL CONSERVATION DIVISION
EXAMINER HEARING SEPTEMBER 6, 2018**

CASE No. 16370

SUNRAY F 1F

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. 16370

AFFIDAVIT OF BRAD PEARSON IN SUPPORT OF CASE NO. 16370

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 five Mesaverde gas wells and three Mesaverde gas wells in the same quarter section in the same standard 317.22-acre, more or less, spacing and proration unit, and three wells in the same quarter section.

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 317.22-acre, more or less, spacing and proration unit in the Blanco-Mesaverde Gas Pool comprised of the E/2 of Section 26, Township 30 North, Range 10 West, San Juan County, New Mexico, in which the following four wells are currently completed and producing:

- a. Sunray F 1A Well (API No. 30-045-23832) Sec. 26, T30N, R10W (Unit J);
- b. Sunray F 1B Well (API No. 30-045-30173), Sec. 26, T30N, R10W (Unit A);
- c. Sunray F 1M Well (API No. 30-045-30830), Sec. 26, T30N, R10W (SHL: J, BHL: P); and
- d. Sunray F 1G Well (API No. 30-045-34742), Sec. 26, T30N, R10W (Unit H).

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

- a. **Sunray F 1F** (API No. 30-045-34450), Sec. 26, T30N, R10W (Unit I).

9. 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 **Sunray F 1F** (API No. 30-045-10998) E/2 of Section 26, Township 30 North, Range 10 West, permitting the total number of wells dedicated and producing within this spacing and proration unit to five, and the number of wells within a quarter section to three.

10. The proposed simultaneous dedication of the **Sunray F 1F 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.

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

12. 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 owns 100% of the working interest, in which case there are no affected parties to notice. I provided a list of all affected parties requiring notice to Holland & Hart LLP.

13. Exhibit A-1 is an overview map identifying the location of the subject Blanco-Mesaverde Gas Pool spacing unit, identified by the red cross-hatching, within Section 26, Township 30 North, Range 10 West, to which the **Sunray F 1F Well** will be simultaneously dedicated.

14. Exhibit A-2 is a map depicting the subject spacing unit, identified by red cross-hatching, showing the locations of the existing Mesaverde wells as black dots, as well as **Sunray F 1F Well** as a blue triangle.

15. Exhibit A-2 also depicts the notice area, depicted in a black outline surrounding the subject spacing unit, comprised of the offsetting spacing units. In this case, Hilcorp is the operator of the offsetting spacing units within the notice area. The only working interest owners requiring notice are: Schultz MGT LTD, Mary F Turner Jr. Rev Trust, Laurence C. Kelly, Steve Coldwell

Trustee, J Glenn Turner Jr. LLC, John Lee Turner, Henrietta E. Schultz Trustee, Fred E. Turner LLC, Enduring Resources, Elizabeth Turner, and BP America Production Company.

16. 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.

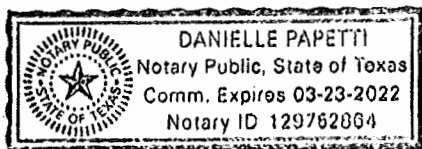
17. Exhibits A-1 and A-2 were prepared by me or under my direction and supervision.

FURTHER AFFIANT SAYETH NAUGHT.

Bradley W. Pearson
Brad Pearson

STATE OF TEXAS)
COUNTY OF Harris)

SUBSCRIBED and SWORN to before me this _____ day of September 5, 2018
by Brad Pearson.



Danielle Papetti
NOTARY PUBLIC

My Commission Expires:

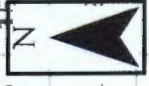
03/23/2022

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BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. A-1
Submitted by: Hilcorp Energy Company
Hearing Date: April 5, 2018
Case # 16370

Legend

Mesaverde Drillblock



15

14

13

Offset Operator:
BP America Petroleum Company
Enduring Resources
Hilcorp Energy Company

22

23

24

30N 10W

27

SAN JUAN

26

25

SUNRAY F 1B
3004530173

SUNRAY F 1F
3004534450

SUNRAY F 1M SUNRAY F 1A
3004530830 3004523832

SUNRAY F 1G
3004534742

34

35

36

Legend



Sunray F 1F



Mesaverde Wells



Mesaverde Drillblock



Offset Boundary

BEFORE THE OIL CONSERVATION DIVISION

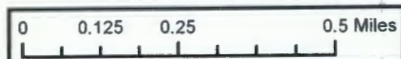
Santa Fe, New Mexico

Exhibit No. A-2

Submitted by: Hilcorp Energy Company

Hearing Date: September 6, 2018

Case # 16370



29N 10W

3

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1

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

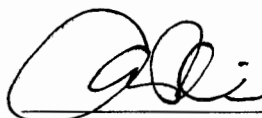
**APPLICATION OF HILCORP ENERGY
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THE BLANCO-MESAVERDE GAS POOL,
SAN JUAN COUNTY, NEW MEXICO.**

CASE NO. 16370

AFFIDAVIT


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

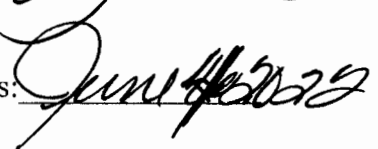
Adam G. Rankin, attorney in fact and authorized representative of HILCORP ENERGY COMPANY the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Applications have been provided under the notice letters and proof of receipts attached hereto.

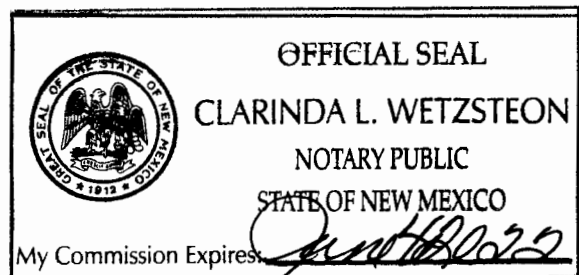


Adam G. Rankin

SUBSCRIBED AND SWORN to before me this 5th day of September 2018 by Adam G. Rankin.


Notary Public

My Commission Expires: 



HOLLAND & HART LLP



Adam G. Rankin

Associate

Phone (505) 988-4421

Fax (505) 983-6043

agrarkin@hollandhart.com

August 3, 2018

VIA CERTIFIED MAIL
CERTIFIED RECEIPT REQUESTED

TO: ALL WORKING INTEREST OWNERS

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. This application will be set for hearing before a Division Examiner at 8:15 a.m. on August 23, 2018. The hearing will be held in Porter Hall in 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

Holland & Hart LLP

Phone (505) 988-4421 **Fax** (505) 983-6043 www.hollandhart.com

110 North Guadalupe Suite 1 Santa Fe, New Mexico 87501 **Mailing Address** P.O. Box 2208 Santa Fe, NM 87504-2208

Aspen Boulder Carson City Colorado Springs Denver Denver Tech Center Billings Boise Cheyenne Jackson Hole Las Vegas Reno Salt Lake City Santa Fe Washington, D.C. ♻

HOLLAND & HART^{LLP}



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

August 3, 2018

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

TO: OFFSETTING OPERATORS

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.

This letter is to advise you that Hilcorp Energy Company has filed the enclosed application with the New Mexico Oil Conservation Division. As a Division-designated operator in an offsetting tract, you are entitled to notice of this application.

This application has been set for hearing before a Division Examiner at 8:15 AM on August 23, 2018. The hearing will be held in Porter Hall in 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 with the Oil Conservation Division's Santa Fe office, four days in advance of a scheduled hearing, but at least on the Thursday preceding the hearing. This statement must 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

Holland & Hart^{LLP}

Phone (505) 988-4421 **Fax** (505) 983-6043 **www.hollandhart.com**

110 North Guadalupe Suite 1 Santa Fe, New Mexico 87501 **Mailing Address** P.O. Box 2208 Santa Fe, NM 87504-2208

Aspen Boulder Carson City Colorado Springs Denver Denver Tech Center Billings Boise Cheyenne Jackson Hole Las Vegas Reno Salt Lake City Santa Fe Washington, D.C. ☎

	A	B	E	F	G	I	J	K
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2	Certified with Return Receipt (Signature)	9414810898765015872557		MARY F TURNER JR REV TRUST	PO BOX 99084	FORT WORTH	TX	76199-0084
3	Certified with Return Receipt (Signature)	9414810898765015872540	LAURENCE C KELLY	ATTN: STEVE COLDWELL TRUSTEE	3239 N. VERDUGO ROAD	GLENDALE	CA	91208-1633
4	Certified with Return Receipt (Signature)	9414810898765015872526		J GLENN TURNER JR LLC	4809 COLE AVENUE, SUITE 212	DALLAS	TX	75205
5	Certified with Return Receipt (Signature)	9414810898765015872533		JOHN LEE TURNER	525 GILMER STREET, #108	SULPHUR SPRINGS	TX	75482
6	Certified with Return Receipt (Signature)	9414810898765015872519		HENRIETTA E SCHULTZ TRUSTEE	400 CHISHOLM PLACE, SUITE 420	PLANO	TX	75075
7	Certified with Return Receipt (Signature)	9414810898765015872502		FRED E TURNER LLC	4925 GREENVILLE AVE, #852	DALLAS	TX	75206
8	Certified with Return Receipt (Signature)	9414810898765015872496		Enduring	1050 17th STREET SUITE 2500	DENVER	CO	80265
9	Certified with Return Receipt (Signature)	9414810898765015872489	ELIZABETH TURNER	ATTN: ROBERT WILBURN, GUARDIAN	PO BOX 191767	DALLAS	TX	75219-8506
10	Certified with Return Receipt (Signature)	9414810898765015872472	BP AMERICA PRODI	ATTN: CRAIG FERGUSON	737 N. ELDRIDGE PARKWAY, E3-12.173B	HOUSTON	TX	77079
11	Certified with Return Receipt (Signature)	9414810898765015872472	BP AMERICA PRODI	ATTN: CRAIG FERGUSON	737 N. ELDRIDGE PARKWAY, E3-12.173B	HOUSTON	TX	77079

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2	08/03/2018	08/09/2018		Your item was delivered to an individual at the address at 1:23 pm on August 6, 2018 in PLANO, TX 75075.	
3	08/03/2018	08/07/2018		Your item was delivered at 5:56 am on August 6, 2018 in FORT WORTH, TX 76161.	
4	08/03/2018	08/08/2018		Your item was delivered to an individual at the address at 2:59 pm on August 6, 2018 in GLENDALE, CA 91208.	
5	08/03/2018	08/07/2018		Your item was delivered to an individual at the address at 1:22 pm on August 6, 2018 in DALLAS, TX 75205.	
6	08/03/2018	08/08/2018		Your item was delivered to an individual at the address at 12:03 pm on August 6, 2018 in SULPHUR SPRINGS, TX 75482.	
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8	08/03/2018	08/08/2018		Your item was delivered to an individual at the address at 1:55 pm on August 7, 2018 in DALLAS, TX 75206.	
9	08/03/2018	08/07/2018		Your item was delivered to an individual at the address at 4:04 pm on August 6, 2018 in DENVER, CO 80202.	
10	08/03/2018	08/22/2018		Your item was delivered to an individual at the address at 3:16 pm on August 20, 2018 in DALLAS, TX 75219.	
11	08/03/2018			We attempted to deliver your package at 7:21 pm on August 6, 2018 in HOUSTON, TX 77079 but could not access the delivery location. We will redeliver on the next business day.	

THE DAILY TIMES

AFFIDAVIT OF PUBLICATION

Ad No.
0001256743

HOLLAND AND HART
PO BOX 2208

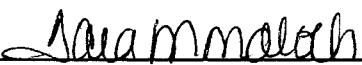
SANTA FE NM 87504

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):

08/02/18


Legal Clerk

Subscribed and sworn before me this
2nd of August 2018.


State of WI, County of Brown
NOTARY PUBLIC


My Commission Expires

Ad#:0001256743
P O:
of Affidavits :0.00

TARA MONDLOCH
Notary Public
State of Wisconsin

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 **August 23, 2018**, 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 **August 13, 2018**. 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: LAURENCE C. KELLY TRUST; HENRIETTA E. SCHULTZ TRUSTEE SCHULTZ MGT LTD; MARY F. TURNER JR REV TRUST; ELIZABETH TURNER CALLOWAY, HER HEIRS AND DEVISEES; J. GLENN TURNER JR LLC; FREDE. TURNER LLC; JOHN LEE TURNER HIS HEIRS AND DEVISEES; BP AMERICA PRODUCTION COMPANY; ENDURING RESOURCE

Case No. 16370: 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 317.22-acre, more or less, spacing and proration unit, and three wells within the same quarter section. Hilcorp further seeks approval for the proposed location of the Sunray F 1F

(API No. 30-045-34450) in the Mesaverde formation with a surface location in Unit I of the E/2 of Section 26, Township 30 North, Range 10 West, NMPM, San Juan County, New Mexico, and authorization to simultaneously complete and produce the **Sunray F 1F** from the Blanco-Mesaverde Gas Pool. Said area is located approximately 8.6 miles east of Bloomfield, NM.

Legal No. 1256743 published in The Daily Times on August 2, 2018.

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

**APPLICATION OF HILCORP ENERGY
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SPECIAL RULES AND REGULATIONS FOR
THE BLANCO-MESAVERDE GAS POOL,
SAN JUAN COUNTY, NEW MEXICO.**

CASE NO. 16370

AFFIDAVIT OF JAMES OSBORN IN SUPPORT OF CASE NO. 16370

I, James Osborn, being of lawful age and duly sworn, declare as follows:

1. My name is James Osborn. 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 gas in place

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 Sunray F 1F (API No. 30-045-34450), Sec. 26, T30N, R10W (Unit I), 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 sixth Mesaverde completion in the spacing unit, and the fourth completion in the same quarter section. I anticipate that it will help drain the area to the east.

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 of cumulative gas production to date from the Blanco-Mesaverde Gas Pool. Warmer colors indicate areas of higher volumes of gas production. Cooler colors indicate areas where there has been less gas production. The red star reflects the location of the subject well where there is relatively low cumulative gas production to date.

8. Exhibit C-4 is a map depicting calculated remaining gas in place, which is determined by subtracting cumulative production from the original gas in place. The cooler colors indicate areas where there is relatively less remaining gas in place. The warmer colors reflect areas where there is relatively more remaining gas in place. The red star identifies the location of the subject well in an area where we calculate that there is relatively considerable remaining gas in place and relatively low gas recoveries 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 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. 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.

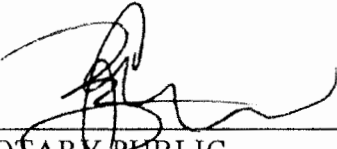
13. Exhibits C-1 through C-5 were prepared by me or under my direction and supervision.

FURTHER AFFIANT SAYETH NAUGHT.


James Osborn

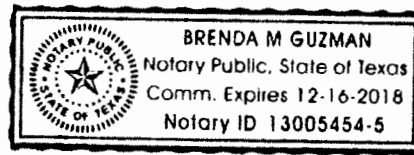
STATE OF TEXAS)
COUNTY OF Harris)

SUBSCRIBED and SWORN to before me this 5th day of September 5, 2018
by James Osborn.

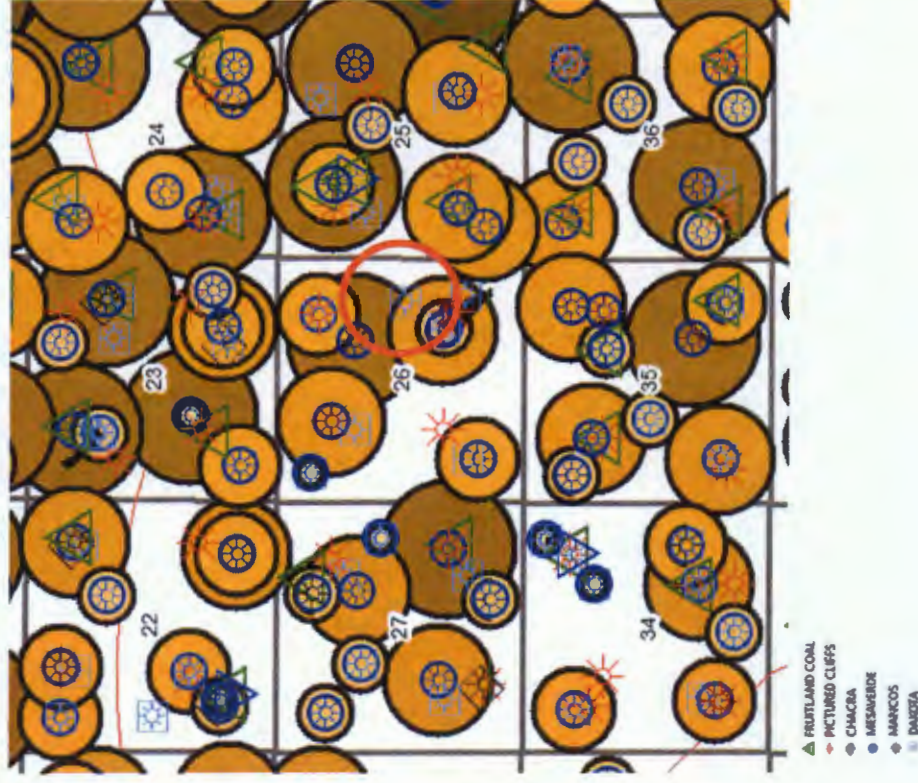

NOTARY PUBLIC

My Commission Expires:

December 16, 2018



Sunray F 1F

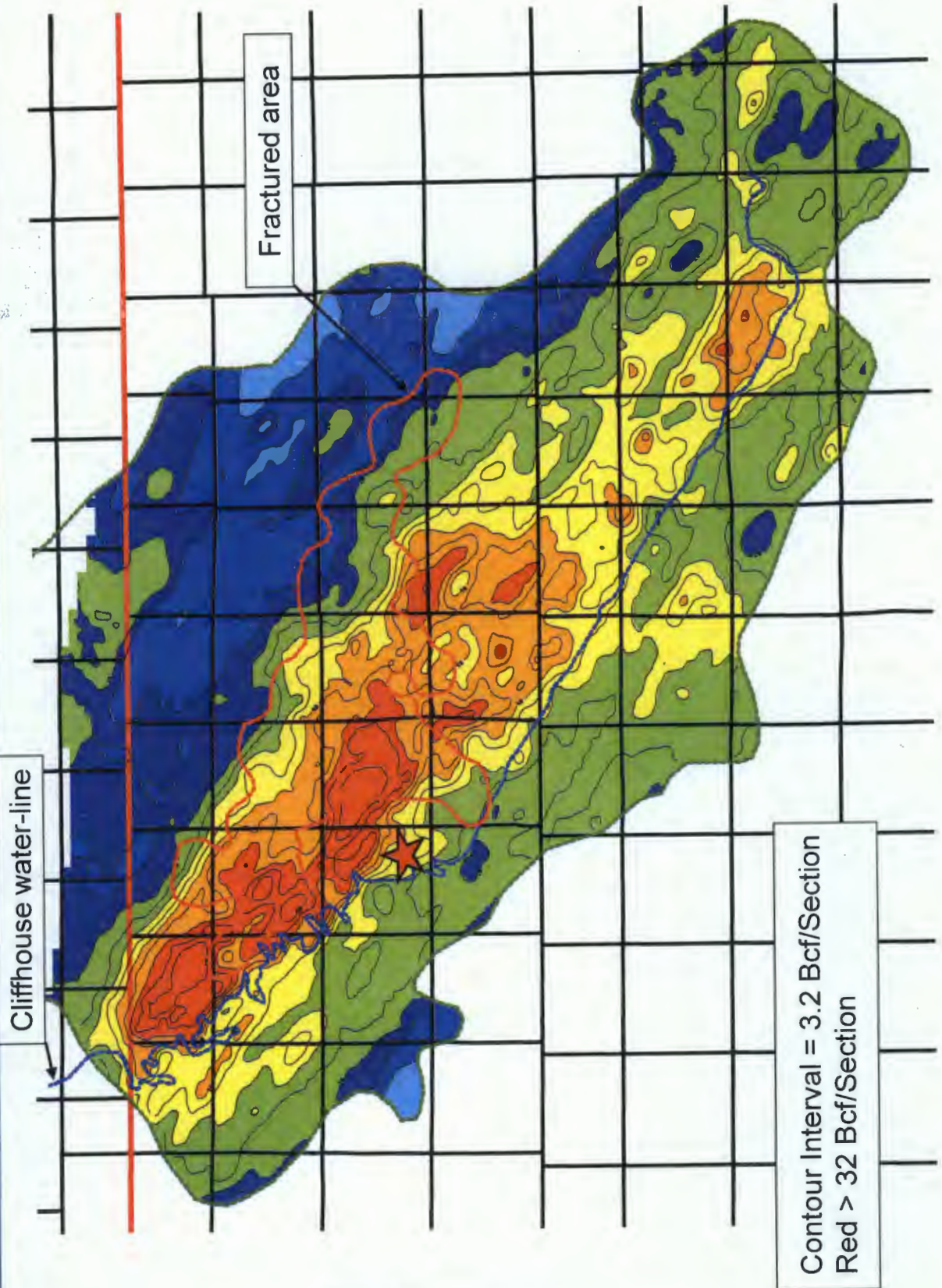


Well Specifics

- SE26 30-10 3004534450 2007 drill
- 6th MV completion in drill block
 - 4th MV completion in 1/4 section
 - Sunray F 1G added MV in June 2018
- 1000' from nearest offset
- Help drain area to east
- Complete entire MV in 3 stages
- 885' from section line



MV Original Gas-in-Place



BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

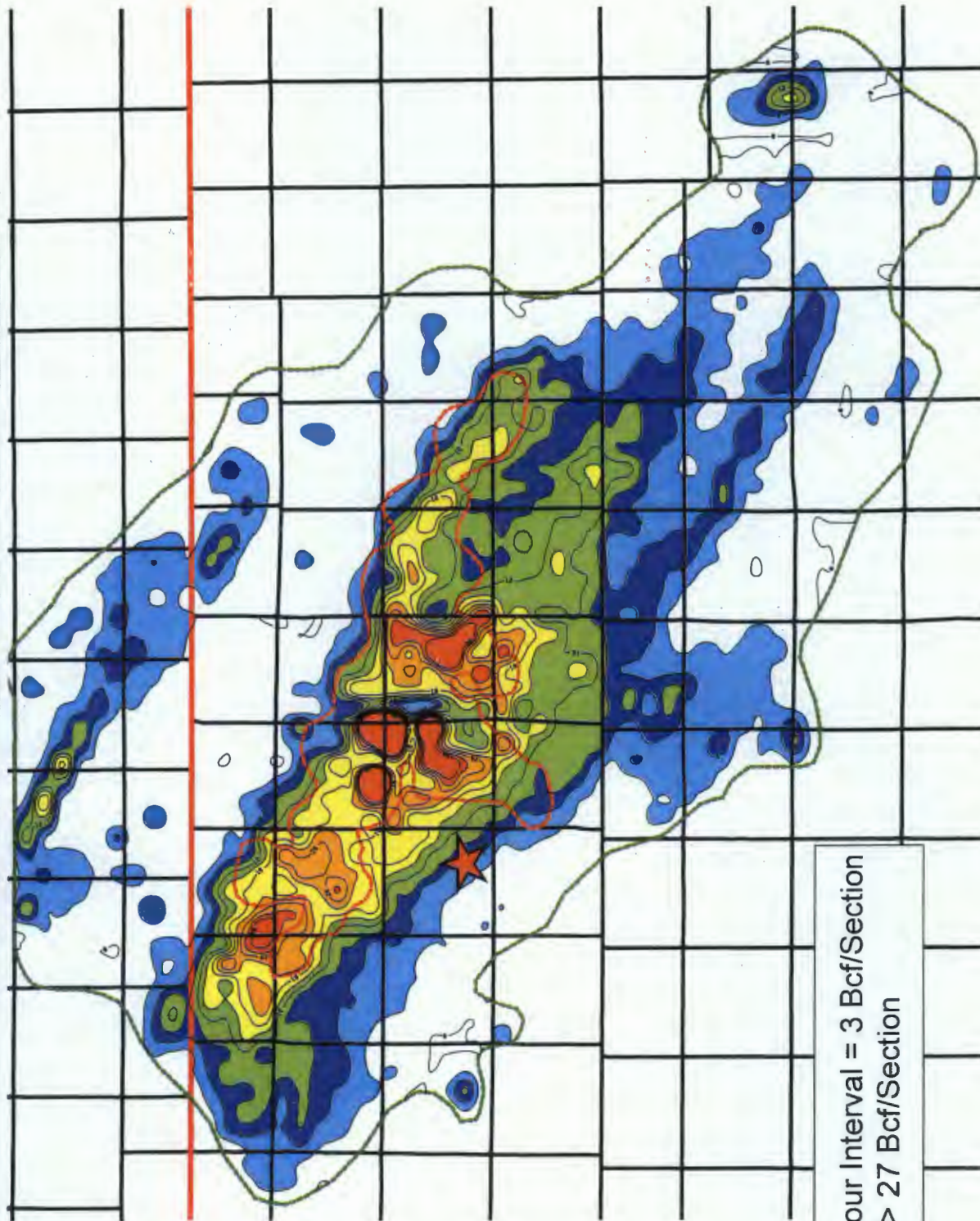
Exhibit No. C-2

Submitted by: Hilcorp Energy Company

Hearing Date: September 6, 2018

Case # 16370

MV Cumulative Gas Production



Contour Interval = 3 Bcf/Section
Red > 27 Bcf/Section

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. C-3

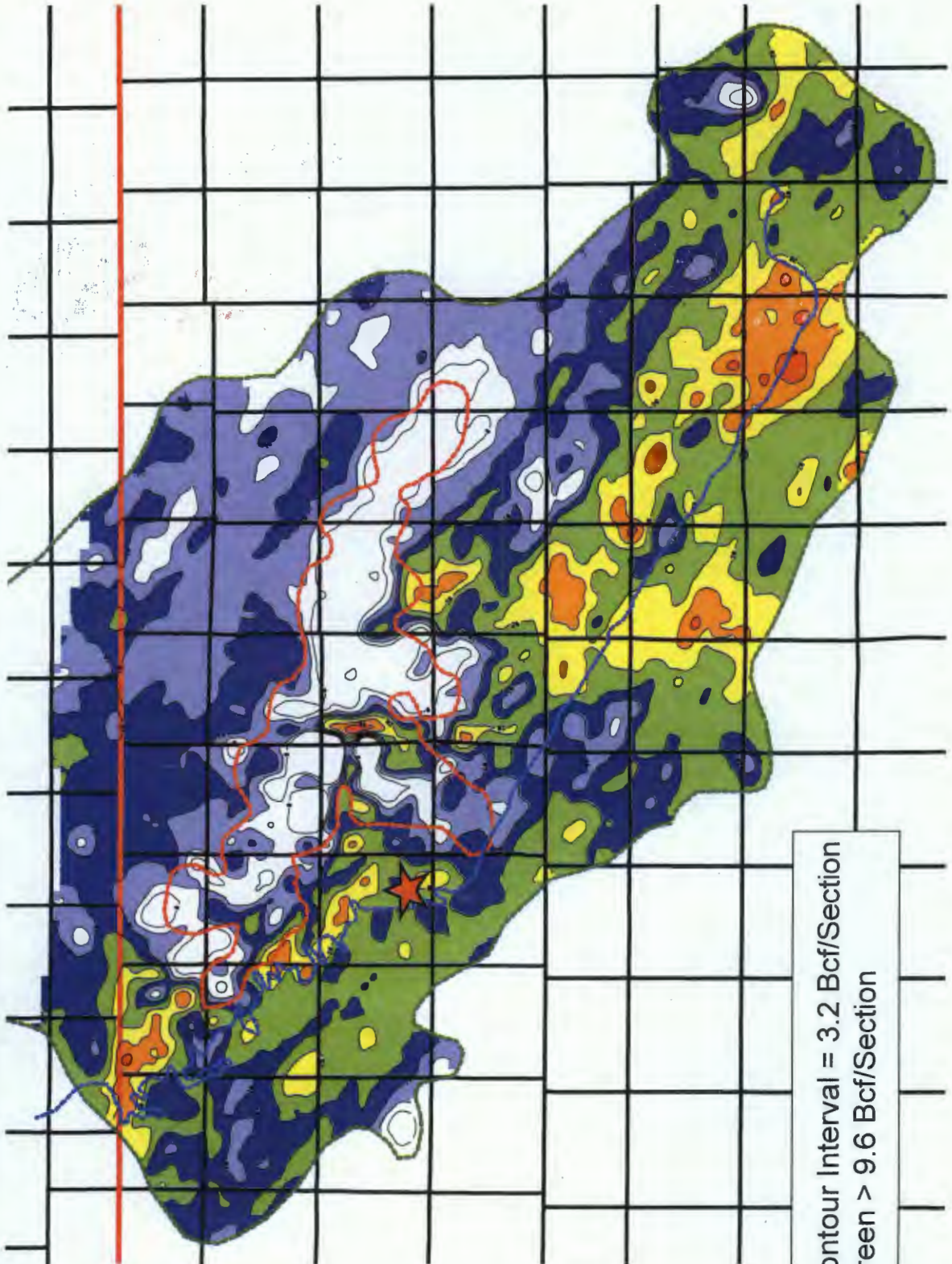
Submitted by: Hilcorp Energy Company

Hearing Date: September 6, 2018

Case # 16370



MV Remaining Gas



Contour Interval = 3.2 Bcf/Section
Green > 9.6 Bcf/Section

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. C-4

Submitted by: Hilcorp Energy Company

Hearing Date: September 6, 2018

Case # 16370

Sunray F 1F



Reference Area	Volumetric OGIP	Section Equivalent OGIP	CTD / RF%	CTD Remaining GIP	EUR / RF% (Historical Data)
Qtr Section	9.4 Bcf	37.6 Bcf	2.1 Bcf / 22%	7.3 Bcf	3.3 Bcf / 35%
Section	34.5 Bcf	34.5 Bcf	7.6 Bcf / 22%	26.9 Bcf	10.2 Bcf / 30%
9 Section	292.7 Bcf	32.5 Bcf	84.8 Bcf / 29%	207.9 Bcf	108.1 Bcf / 37%

- Remaining Gas in Place in Quarter Section of 7.3 Bcf
- Cumulative Recovery Factor to Date 22% and 22% in the Quarter Section and Section, respectively
- Considerable gas remaining in area with opportunity to recover additional volumes utilizing existing wellbore