

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

CASE NO. 20641

NYE 010E 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. 20641

AFFIDAVIT OF ROB CARLSON IN SUPPORT OF CASE NO. 20641

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 four Mesaverde gas wells in the same standard 323-acre, more or less, spacing and proration unit, with two wells in the same quarter-quarter section equivalent.

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 323-acre, more or less, spacing and proration unit in the Blanco-Mesaverde Gas Pool comprised of the N/2 of Section 12, Township 30 North, Range 11 West, San Juan County, New Mexico, in which the following three wells are currently completed and producing:

- a. Nye SRC 013 Well (API No. 30-045-09757), Sec. 12, T30N, R11W (Lot 4);
- b. Nye 016 Well (API No. 30-045-21803), Sec. 12, T30N, R11W (Lot 7); and
- c. Nye 016A Well (API No. 30-045-22861), Sec. 12, T30N, R11W (Lot 3).

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

- a. **Nye 010E Well** (API No. 30-045-24872), Sec. 12, T30N, R11W (Lot 7).

9. This will be the fourth well within the same spacing unit with two wells in the same quarter-quarter section equivalent (Lot 7), 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 **Nye 010E Well** (API No. 30-045-24872) within the N/2 of Section 12, Township 30 North, Range 11 West,

permitting the total number of wells dedicated and producing within this spacing and proration unit to four, with two wells in the same quarter-quarter section equivalent (Lot 7).

11. The 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 wells as dark blue triangles.

16. Exhibit A-1 also depicts the notice area comprised of the offsetting spacing units, which is the area within the dashed 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 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. 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.

Rob Carlson

COUNTY OF HARRIS

Carlson.





3/23/2022





BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. A-1
Submitted by: **Hilcorp Energy Company**
Hearing Date: July 11, 2019
Case # 20641

Legend

 NYE 10E

 Mesaverde Well

 Mesaverde Proration Unit

Affected Offset
 Hilcorp Energy Company

NTE 610E (30-045-24672)		Well Name	Ownership Type	Location	Deck #	BA #	Owner Name	Address 1	Address 2	City	State	Zip	Surface
Operator	HEC	Nye 026 (30-045-21803)	OPERATOR	N2 DRILLBLOCK	122373	300	Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002	BLM
	BP	Bianco Com 2-18 (30-045-23221)	Offset Operator	W2 NW Drillblock		1066712	BP America Production Company	737 N Eldridge Parkway		Houston	TX	77079	Fee/State
	HEC	Nye SMC 003 (30-045-09586)	Offset WIO	E2 NW Drillblock	122373	300	Hilcorp San Juan, LP	737 N Eldridge Parkway		Houston	TX	77079	Fee/State/BLM
	HEC	Nye SMC 003 (30-045-09864)	Offset WIO	N Drillblock	113604	300	Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002	BLM
	HEC	Atlantic C 006 (30-045-09854)	Offset WIO	W2 NE Drillblock	113604	300	Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002	BLM
	BP	Atlantic C 006A (30-045-23153)	Offset WIO	E2 NE Drillblock			Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002	BLM
	BP	Storey B LS 004 (30-045-09524)	Offset Operator	W2 W Drillblock &		1066712	BP America Production Company	737 N Eldridge Parkway		Houston	TX	77079	Fee
	BP	Storey B LS 001A (30-045-23381)	Offset Operator	W2 SW Drillblock			BP America Production Company	737 N Eldridge Parkway		Houston	TX	77079	Fee/BLM
	HEC	NTE 001 (30-045-09611)	Offset WIO	E2 W Drillblock	122373	300	Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002	Fee/BLM
	HEC	Surray J 001 (30-045-09617)	Offset Operator	S Drillblock	113604	300	Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002	BLM
	HEC	Sullivan 001A (30-045-24679)	Offset WIO	E Drillblock	113604	300	Hilcorp San Juan, LP	1111 Travis Street		Houston	TX	77002	BLM

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. A-2
Submitted by: Hilcorp Energy Company
Hearing Date: July 11, 2019
Case # 20641

**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. 20641

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 Application has been provided under the notice letters and proof of receipts attached hereto.



Adam G. Rankin

SUBSCRIBED AND SWORN to before me this 10th day of July, 2019 by Adam G. Rankin.



Notary Public

My Commission Expires:

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 # 20641

HOLLAND & HART^{LLP}



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

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 Rob Carlson at (832) 839-4596.

Sincerely,

Adam G. Rankin
ATTORNEY FOR HILCORP ENERGY COMPANY

POSTAL DELIVERY REPORT
HEC /NYE 010E
CASE NO. 20641

TrackingNo	TransactionDate	ToName	DeliveryAddress	City	State	Zip	USPS Status
9414810898765037644521	06/20/2019	BP America Production Company	737 N Eldridge Pkwy	Houston	TX	77079-4411.	Your package will arrive later than expected, but is still on its way. It is currently in transit to the next facility

AFFIDAVIT OF PUBLICATION

Ad No.
0001289416

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

My Commission Expires

Ad#:0001289416
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 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 **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 SUBJECTSPACINGUNIT AND OFFSETTING OPERATORSOR LEASED MINERAL INTEREST OWNERS, INCLUDING: BP AMERICA PRODUCTION COMPANY.

CASE 20641: 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 four Mesaverde gas wells in the same standard 323-acre, more or less, spacing and proration unit, with two wells in the same quarter-quarter section equivalent (Lot 7). Hilcorp further seeks approval for the proposed location of the **Nye 010E Well** (API No. 30-045-24872) in the Mesaverde formation with a surface location in Lot 7 within the N/2 of Section 12, Township 30 North, Range 11 West, NMPM, San Juan County, New Mexico, and authorization to simultaneously complete and produce the **Nye 010E Well** from the Blanco-Mesaverde Gas Pool. Said area

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico

Exhibit No. B-2

Submitted by: Hilcorp Energy Company

Hearing Date: July 11, 2019

Case # 20641



is located approximately 3 miles east of Aztec,
NM.

Legal No. 1289416 published in The Daily Times
on June 26, 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. 20641

AFFIDAVIT OF ALEX LIANG IN SUPPORT OF CASE NO. 20641

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 **Nye 010E Well** (API No. 30-045-24872) within the N/2 of Section 12, Township 30 North, Range 11 West, 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 second Mesaverde completion in the in the same quarter-quarter section equivalent in the spacing unit. I anticipate that it will help drain the area to the southeast.

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.

Alex Liang
Alex Liang

STATE OF NEW MEXICO)
COUNTY OF San Juan)

SUBSCRIBED and SWORN to before me this 3 day of July, 2019 by Alex Liang.

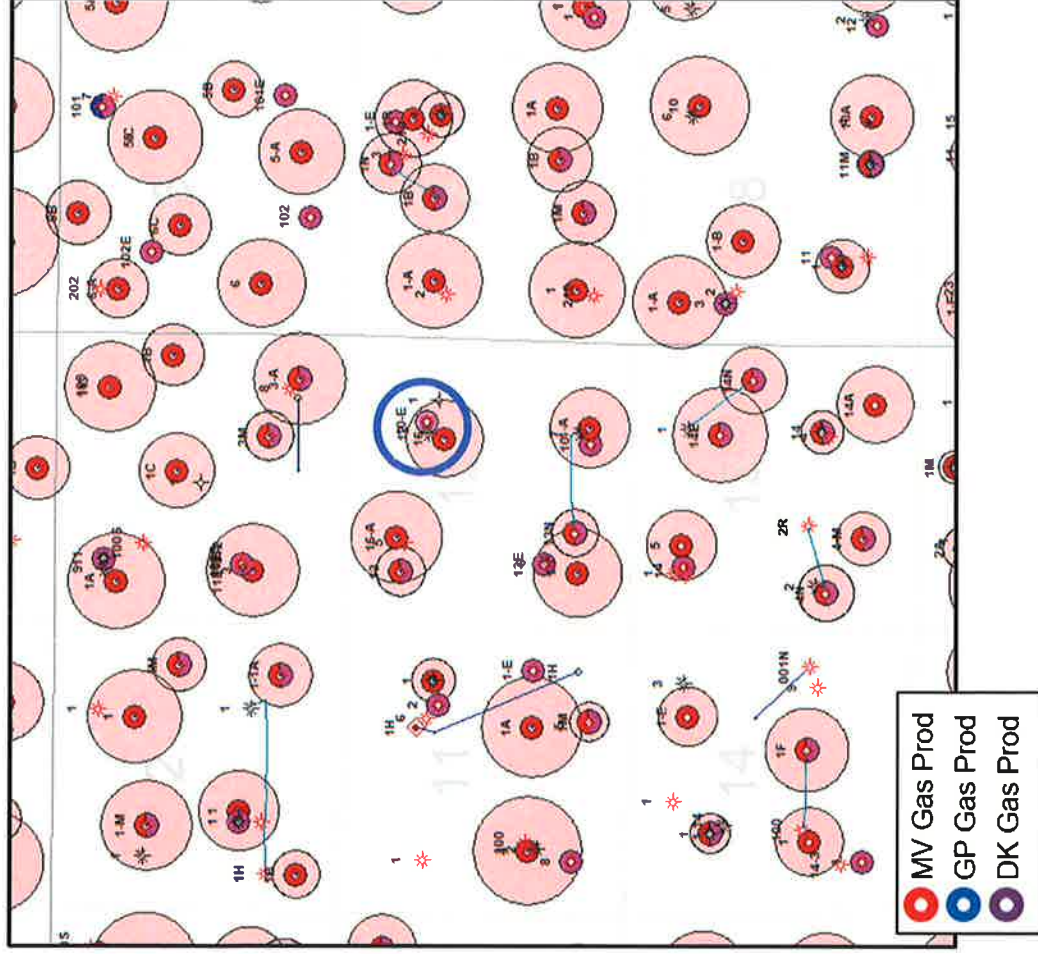
Lisabeth Jones
NOTARY PUBLIC

My Commission Expires:

1/2/2022



Nye 10E

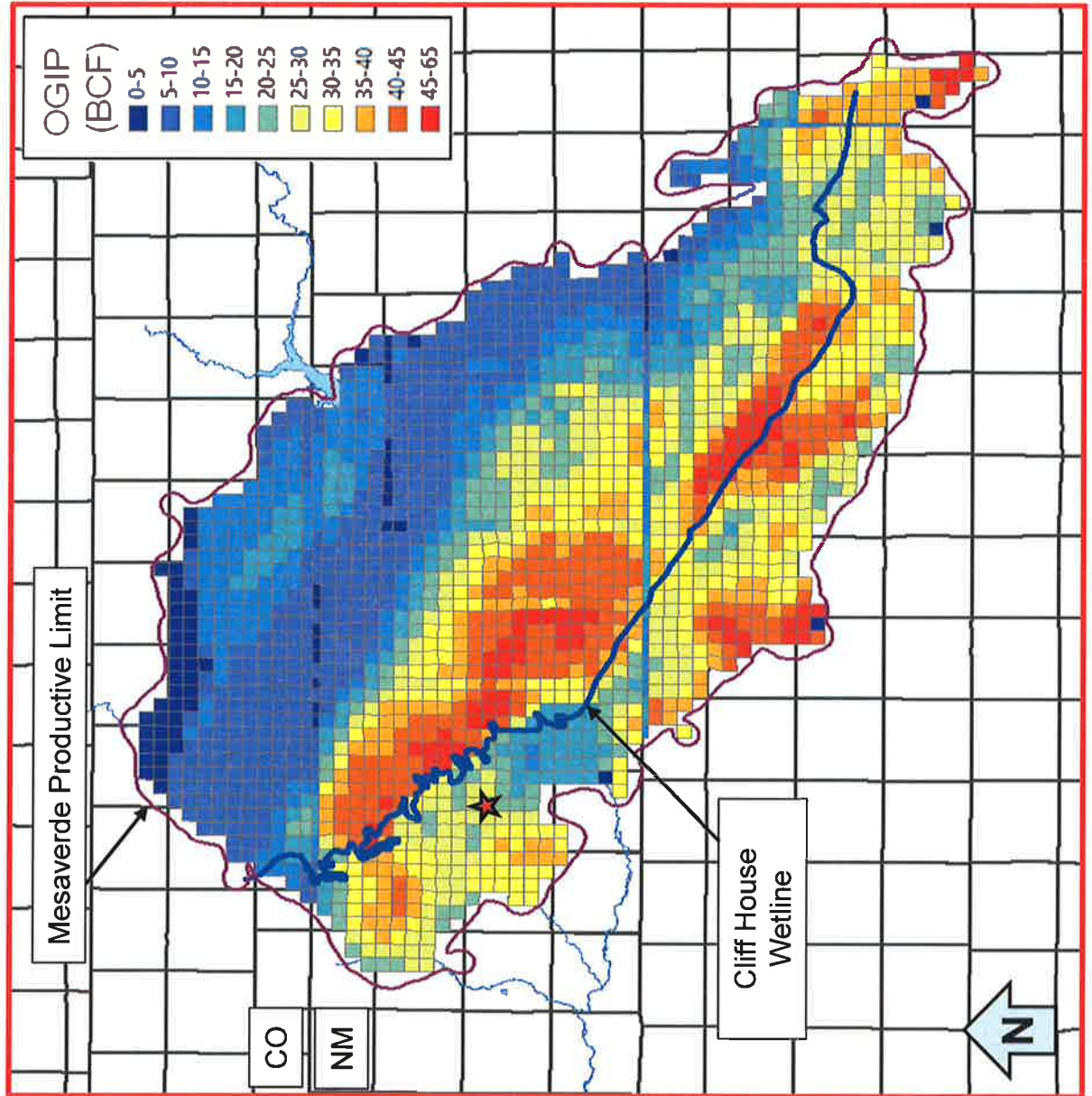


Well Specifics

- NE12 30-11 3004524872 1981 drill
- 3rd MV completion in 1/4 section
- 400' from nearest MV producer
- Help drain area to the north
- Complete MV in 1-2 stages

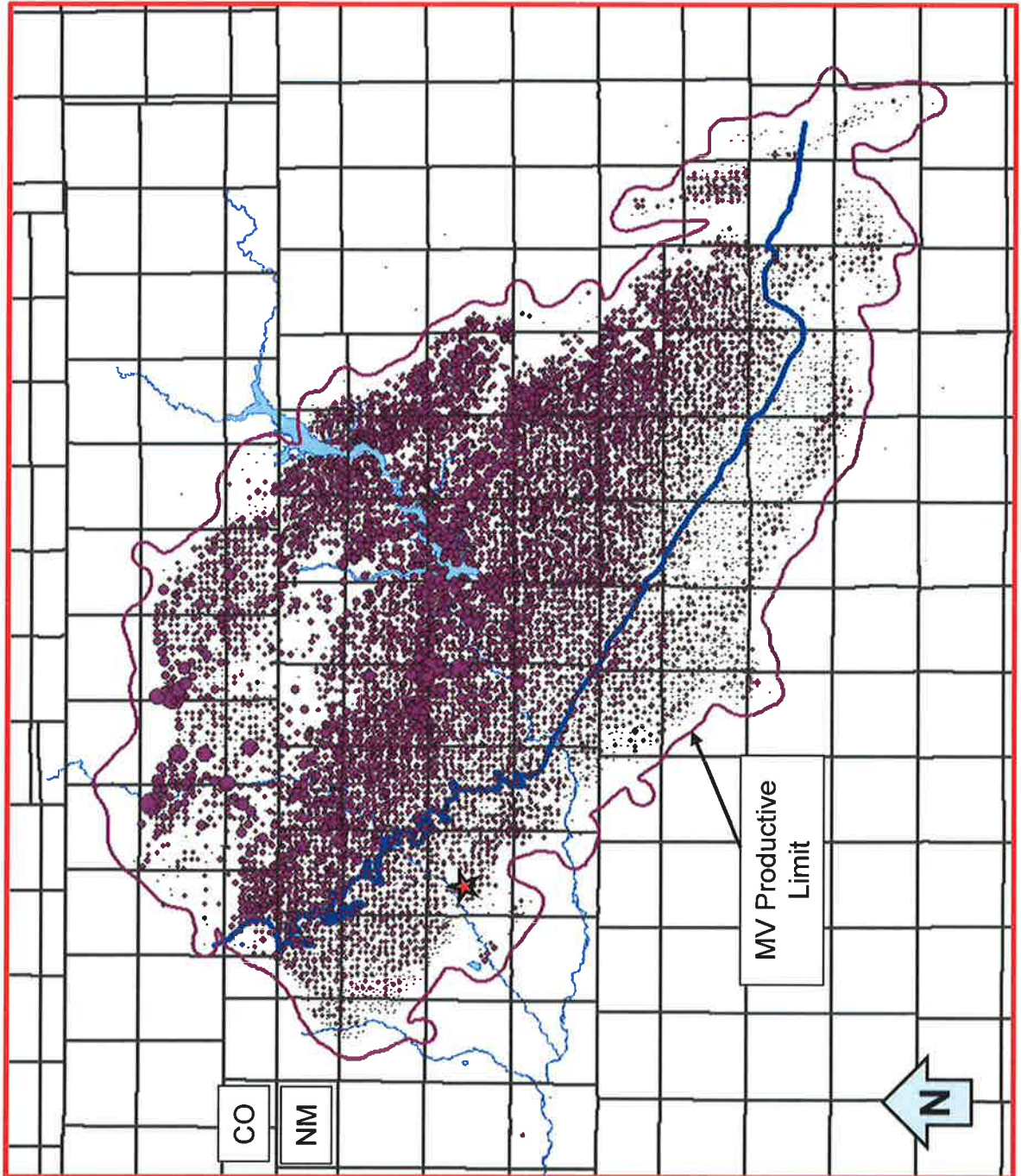


MV Original Gas In Place



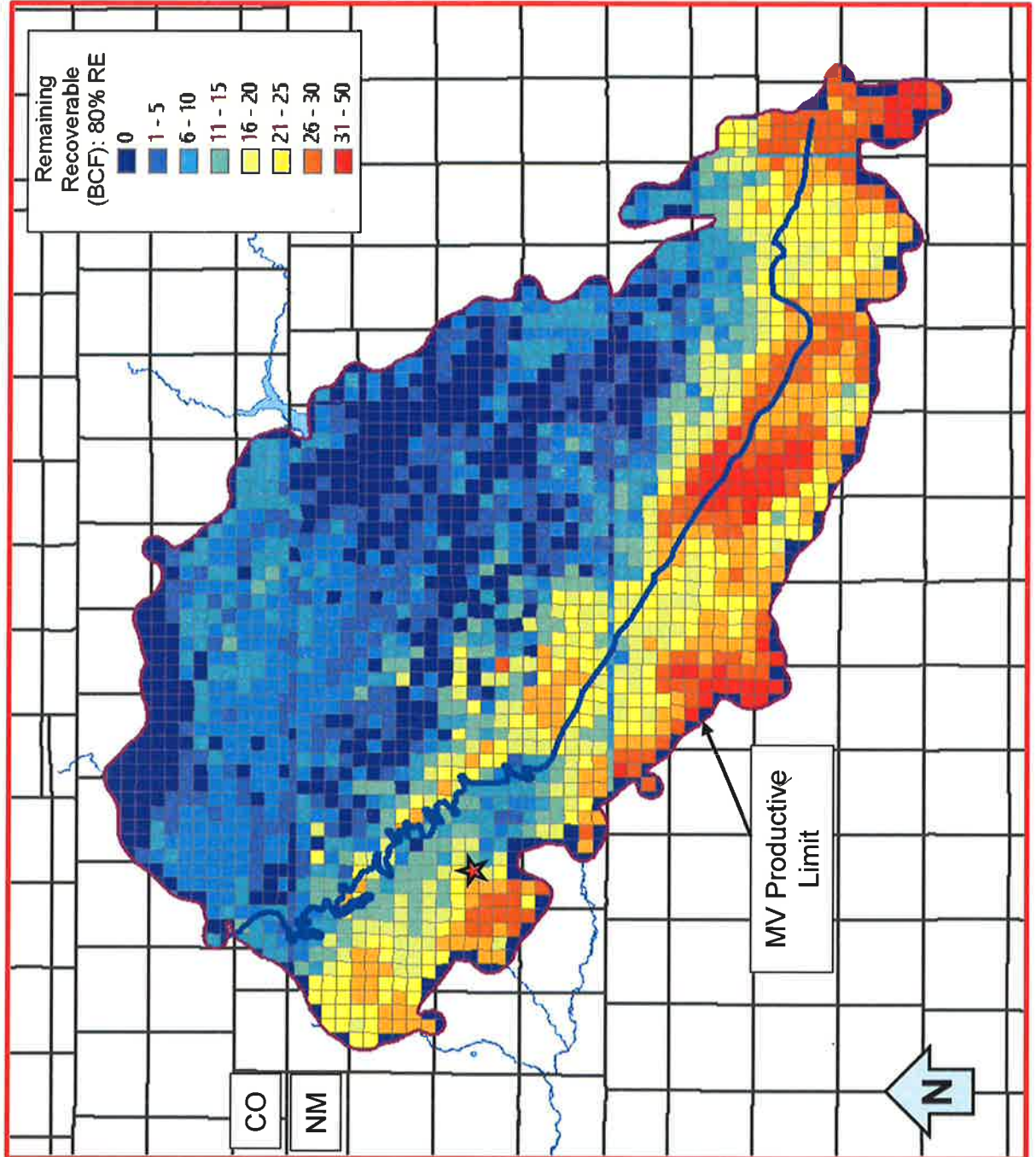


MV EUR and Drainage Radius





MV Remaining Recoverable Gas



Nye 10E



Reference Area	Volumetric OGIP	Section Equivalent OGIP	CTD / RF%	Remaining GIP	EUR / RF%
Qtr Section	6.4 Bcf	9.2 Bcf	1.3 Bcf / 20%	5.1 Bcf	1.7 Bcf / 26%
Section	26.4 Bcf	26.4 Bcf	7.1 Bcf / 27%	19.3 Bcf	9.4 Bcf / 36%
9 Section	233.9 Bcf	26.0 Bcf	61.0 Bcf / 26%	172.9 Bcf	87.5 Bcf / 37%

- Remaining Gas in Place in Quarter Section of 5.1 Bcf
- Cumulative Recovery Factor to Date 20% and 27% in the Quarter Section and Section, respectively
- Considerable gas remaining in area with opportunity to recover additional volumes utilizing existing wellbore

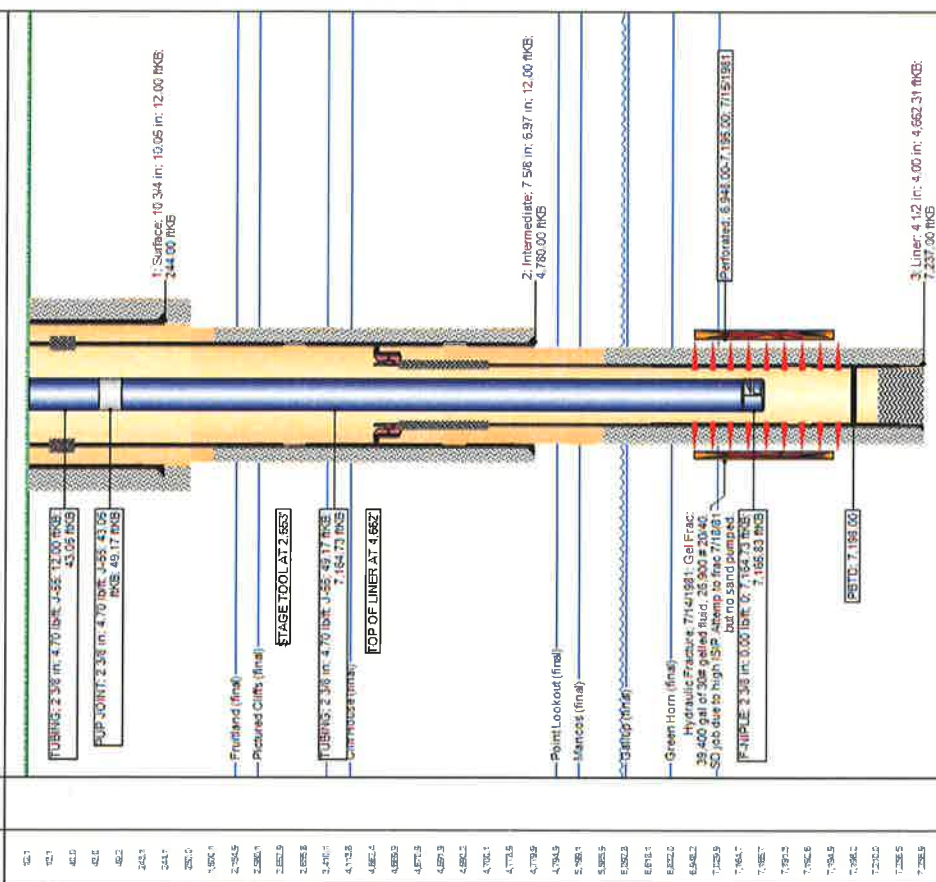
Allcorp Energy Company

Well Name: NYE #10E

[illegible]

VERTICAL, Original Hole, 6/20/2019 12:49:29 PM

Vertical schematic (actual)



www.petitot.com

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Report Printed: 6/20/2019

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. C-6
Submitted by: **Hilcorp Energy Company**
Hearing Date: July 11, 2019
Case # 20641