

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

**APPLICATION FOR DOWNHOLE COMMINGLING  
SUBMITTED BY HILCORP ENERGY CO.**

**ORDER NO. DHC-5446**

**ORDER**

The Director of the New Mexico Oil Conservation Division ("OCD"), having considered the application and the recommendation of the Engineering Bureau, issues the following Order.

**FINDINGS OF FACT**

1. Hilcorp Energy Corporation ("Applicant") submitted a complete application ("Application") to downhole commingle the pools described in Exhibit A ("the Pools") within the well bore of the well identified in Exhibit A ("the Well").
2. Applicant proposed a method to allocate the oil and gas production from the Well to each of the Pools that is satisfactory to the OCD and protective of correlative rights.
3. Applicant has certified that all produced fluids from all the Pools are compatible with each other.
4. Applicant has certified that downhole commingling the Pools will not decrease the value of the oil and gas production.
5. An exception to the notification requirements within 19.15.12.11(C)(1)(b) NMAC was granted by the Division within Order R-13764.
6. Applicant provided notice of the Application to the Bureau of Land Management ("BLM") or New Mexico State Land Office ("NMSLO"), as applicable.

**CONCLUSIONS OF LAW**

7. OCD has jurisdiction to issue this Order pursuant to the Oil and Gas Act, NMSA 1978, Sections 70-2-6, 70-2-11, 70-2-12, 70-2-16, 70-2-17, and 19.15.12 NMAC.
8. The downhole commingling of the Pools is common, or Applicant has provided evidence that the fluids are compatible and will not damage the Pools in accordance with 19.15.12.11(A)(1) NMAC.
9. The bottom perforation of the lower zone is within one hundred fifty percent (150%) of the depth of the top perforation in the upper zone or Applicant has provided evidence that the proposed commingling of the Pools shall not result in shut-in or flowing well bore pressure in excess of the commingled pool's fracture parting pressure in accordance with 19.15.12.11(A)(3) NMAC.

10. Applicant's proposed method of allocation, as modified herein, complies with 19.15.12.11(A)(8) NMAC.
11. By granting the Application with the conditions specified below, this Order prevents waste and protects correlative rights, public health, and the environment.

### **ORDER**

1. Applicant is authorized to downhole commingle the Pools described in Exhibit A within the well bore of the well identified in Exhibit A.
2. This Order supersedes Order DHC-4889.
3. Applicant shall allocate a fixed percentage of the oil production from the Well to each of the Pools until a different plan to allocate oil production is approved by OCD. Of the oil production from the Well:

- a. fifty two percent (52%) shall be allocated to the Blanco Mese Verde pool (pool ID: 72319) and
- b. forty one percent (41%) shall be allocated to the Basin Mancos pool (pool ID: 97232); and
- c. seven percent (7%) shall be allocated to the Basin Dakota pool (pool ID: 71599)

Applicant shall allocate gas production to the new pool(s) equal to the total gas production from the Well minus the projected gas production from the current pool(s) until a different plan to allocate gas production is approved by OCD. The new pool(s) are:

- a. the Blanco Mesa Verde pool (pool ID: 72319); and
- b. the Basin Mancos pool (pool ID: 97232).

The current pool(s) are:

- a. the Basin Dakota pool (pool ID: 71599); and

Until a different plan to allocate gas production is approved by OCD, of the gas production allocated to the new pools:

- a. sixty nine percent (69%) shall be allocated to the Blanco Mesa Verde pool (pool ID: 72319); and
- b. thirty one percent (31%) shall be allocated to the Basin Mancos pool (pool ID: 97232).

Applicant shall calculate the oil and gas production average during the fourth year after the commencement of commingling, which shall be used to establish a fixed percentage of the total oil and gas production that shall be allocated to each of the Pools ("fixed percentage allocation plan"). No later than ninety (90) days after the fourth year, Applicant shall submit a Form C-103 to the OCD Engineering Bureau that includes the fixed percentage allocation plan and all data used to determine it. If Applicant fails to do so, this Order shall terminate on the following day. If OCD denies the fixed percentage allocation plan, this Order shall terminate on the date of such action. If OCD approves the percentage allocation plan with or without modifications, then the approved percentage allocation plan shall be used to

determine oil and gas allocation starting on the date of such action until the Well is plugged and abandoned.

4. If an alteration is made to the Well or a condition within the Well changes which may cause the allocation of production to the Pools as approved within this Order to become inaccurate, then no later than sixty (60) days after that event, Applicant shall submit Form C-103 to the OCD Engineering Bureau describing the event and include a revised allocation plan. If OCD denies the revised allocation plan, this Order shall terminate on the date of such action.
5. If any of the pools being commingled is prorated, or the Well's production has been restricted by an OCD order in any manner, the allocated production from each producing pool in the commingled well bore shall not exceed the top oil or gas allowable rate for a well in that pool or rate restriction applicable to the well.
6. If the Well is deepened, then no later than forty-five (45) days after the Well is deepened, Applicant shall conduct and provide logs to OCD that are sufficient for OCD to determine which pool(s) each new completed interval of the Well will produce from.
7. If the downhole commingling of the Pools reduces the value of the oil and gas production to less than if it had remained segregated, no later than sixty (60) days after the decrease in value has occurred Applicant shall submit a new downhole commingling application to OCD to amend this Order to remove the pool that caused the decrease in value. If Applicant fails to submit a new application, this Order shall terminate on the following day, and if OCD denies the application, this Order shall terminate on the date of such action.
8. If a completed interval of the Well is altered from what is submitted within the Application as identified in Exhibit A, then no later than sixty (60) days after the alteration, Applicant shall submit Form C-103 to the OCD Engineering Bureau detailing the alteration and completed interval.
9. If OCD determines that Applicant has failed to comply with any provision of this Order, OCD may take any action authorized by the Oil and Gas Act or the New Mexico Administrative Code (NMAC).
10. OCD retains jurisdiction of this matter and reserves the right to modify or revoke this Order as it deems necessary.

**STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION**



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**GERASIMOS RAZATOS  
DIRECTOR (ACTING)**

**DATE:** 1/14/2025

State of New Mexico  
Energy, Minerals and Natural Resources Department

Exhibit A

Order: DHC - 5446			
Operator: Hilcorp Energy Company (372171)			
Well Name: San Juan 27 5 Unit Well No. 141			
Well API: 30-039-20465			
Upper Zone	Pool Name: Blanco - MesaVerde (Prorated Gas)		
	Pool ID: 72319	Current:	New: X
	Allocation: Subtraction	Oil: 52.0%	Gas: 69.0%
		Top: 4,329	Bottom: 5,770
Intermediate Zone	Pool Name: Basin Mancos		
	Pool ID: 97232	Current:	New: X
	Allocation:	Oil: 41.0%	Gas: 31.0%
		Top: 5,770	Bottom: 7,170
Bottom of Interval within 150% of Upper Zone's Top of Interval: NO			
Lower Zone	Pool Name: Basin Dakota		
	Pool ID: 71599	Current: X	New:
	Allocation:	Oil: 7.0%	Gas: Curv
		Top: 7,280	Bottom: 7,492
Bottom of Interval within 150% of Upper Zone's Top of Interval: NO			



**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural**  
**Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form C-102  
August 1, 2011

Permit 259880

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-039-20465	2. Pool Code 72319	3. Pool Name BLANCO-MESAVERDE (PRORATED GAS)
4. Property Code 318920	5. Property Name SAN JUAN 27 5 UNIT	6. Well No. 141
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 6382

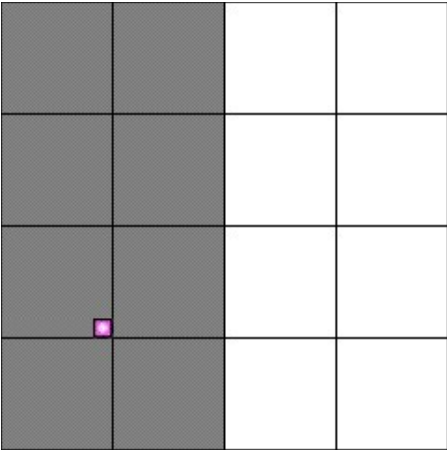
**10. Surface Location**

UL - Lot L	Section 30	Township 27N	Range 05W	Lot Idn	Feet From 1460	N/S Line S	Feet From 1190	E/W Line W	County RIO ARRIBA
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**11. Bottom Hole Location If Different From Surface**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
12. Dedicated Acres 320.28 W/2	13. Joint or Infill			14. Consolidation Code			15. Order No.		

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

	<p style="text-align: center;"><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>E-Signed By: <b>Cherylene Weston</b>  Title: Operations/Regulatory Tech Sr.  Date: 11/14/2018</p> <hr/> <p style="text-align: center;"><b>SURVEYOR CERTIFICATION</b></p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>Surveyed By: David Kilven  Date of Survey: 1/11/1972  Certificate Number: 1760</p>
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**Oil Conservation Division**  
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Form C-102  
August 1, 2011

Permit 360113

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-039-20465	2. Pool Code 97232	3. Pool Name BASIN MANCOS
4. Property Code 318920	5. Property Name SAN JUAN 27 5 UNIT	6. Well No. 141
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 6382

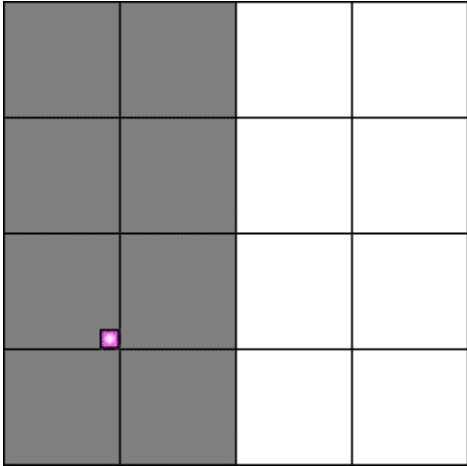
**10. Surface Location**

UL - Lot L	Section 30	Township 27N	Range 05W	Lot Idn	Feet From 1460	N/S Line S	Feet From 1190	E/W Line W	County RIO ARRIBA
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**11. Bottom Hole Location If Different From Surface**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
12. Dedicated Acres 320.28 W/2	13. Joint or Infill			14. Consolidation Code			15. Order No.		

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

	<p style="text-align: center;"><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>E-Signed By: <b>Cherylene Weston</b>  Title: Operations/Regulatory Tech-Sr.  Date: 2/19/2024</p> <hr/> <p style="text-align: center;"><b>SURVEYOR CERTIFICATION</b></p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>Surveyed By: David Kilven  Date of Survey: 1/11/1972  Certificate Number: 17600</p>
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NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the corner to the corner of the well.

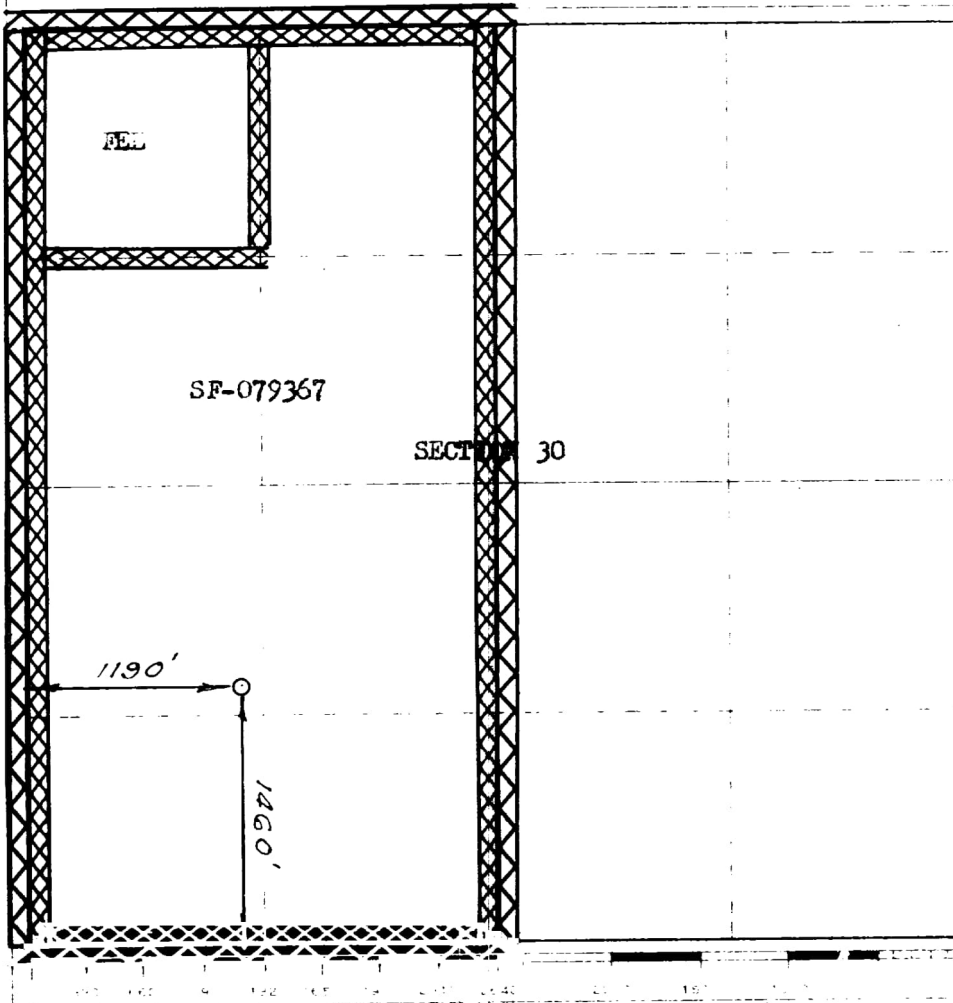
EL PASO NATURAL GAS COMPANY		SAN JUAN 27-5 UNIT		(SF-079367)	141
L	30	27-N	5-N	RIO ARriba	
1160	SOUTH	1190	WEST		
6302	DAKOTA	BASIN DAKOTA	320.28 ✓		

1. Outline the acreage dedicated to the subject well by colored pencil or machine marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (dedicate, working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force pooling, etc.?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated (attach this form if necessary.)

No. If owner will be assigned to the well until all interests have been consolidated by communitization, unitization, force pooling, or otherwise or until a non-standard unit, eliminating such interests, has been approved by the Commission.



I hereby certify that the information furnished herein is true and correct to the best of my knowledge and belief.

Original Signed By:

L. O. Van Ryan

Petroleum Engineer

El Paso Natural Gas Co.

January 26, 1972

I hereby certify that the information furnished herein is true and correct to the best of my knowledge and belief.

JANUARY 11, 1972

*Paul Wilson*  
1760



## San Juan 27-5 Unit 141 Allocation

These zones are proposed to be commingled because the application of dual completions impedes the ability to produce the shallow zone without artificial lift and the deeper zones with reduced artificial lift efficiency. All horizons will require artificial lift due to low bottomhole pressure (BHP) and permeability.

The BHPs of all zones, producing and non-producing, were estimated based upon basin wide Moving-Domain Material Balance models that have proven to approximate the pressure in the given reservoirs well in this portion of the basin, in conjunction with shut-in pressure build-ups. These models were constructed incorporating reservoir dynamics and physics, historic production, and observed pressure data. Historic commingling operations have proven reservoir fluids are compatible.

### Production Allocation Method – Subtraction

#### Gas Allocation:

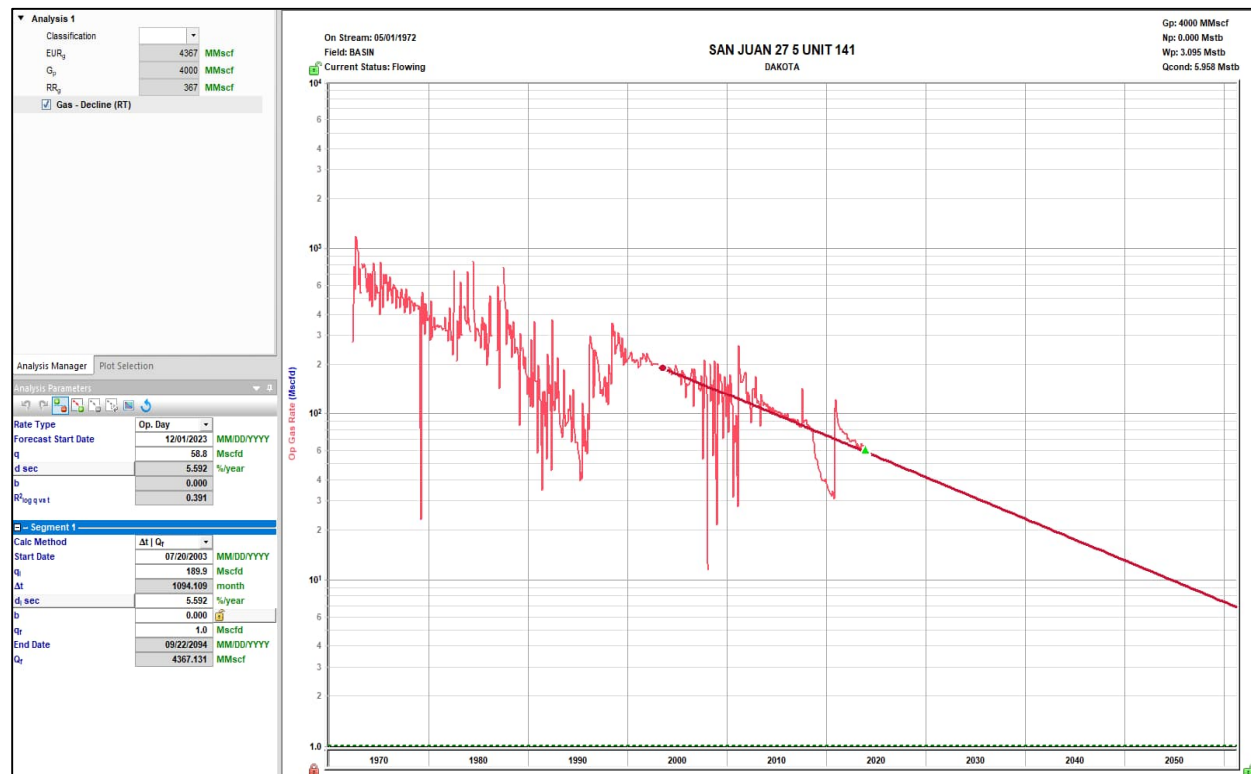
Production for the downhole commingle will be allocated using the subtraction method in agreement with local agencies. The base formation is the Dakota and the added formations to be commingled are the Mancos and Mesaverde. The subtraction method applies an average monthly production forecast to the base formation using historic production. All production from this well exceeding the base formation forecasts will be allocated to the new formations.

New zones will be allocated using a fixed allocation. Forecasted rates for Mancos and Mesaverde are based on offsets type curve. The maps show the standalone offsets that were used for type-curves. The split between MC/MV is based on the ratio of forecasted reserves as shown in the table below.

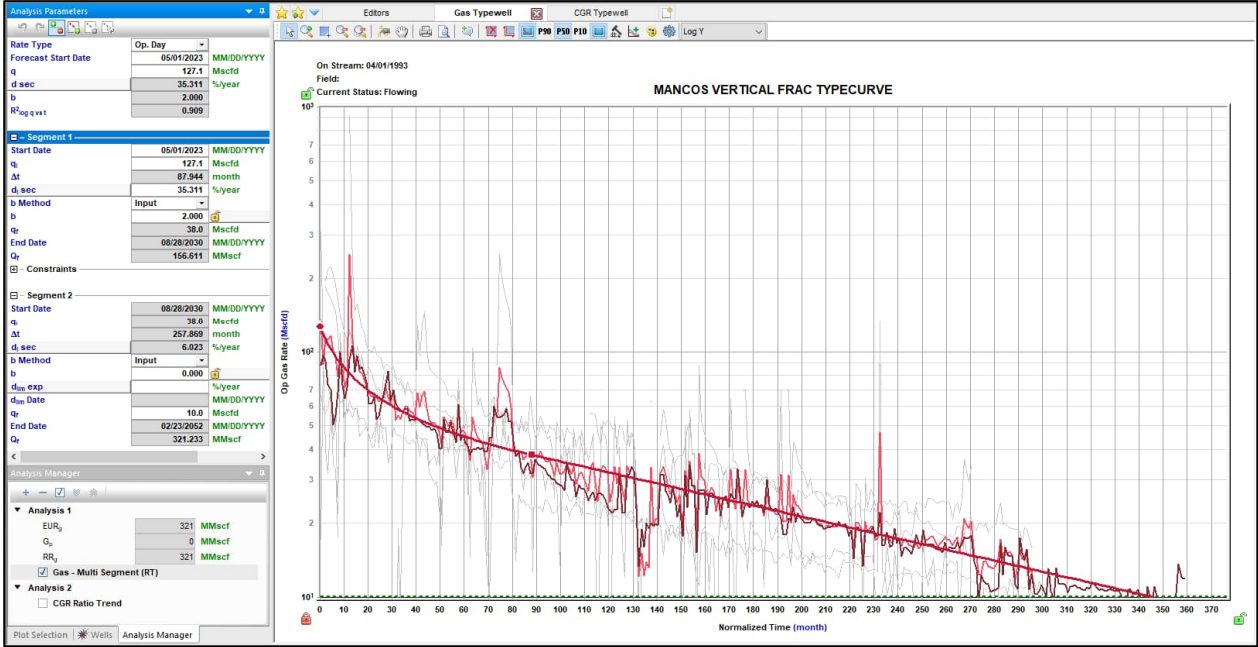
Formation	Remaining Reserves (MMcf)	% Gas Allocation
Mancos	321	31%
Mesaverde	749	69%

After 3 years production will stabilize. A production average will be gathered during the 4<sup>th</sup> year and will be utilized to create a fixed percentage-based allocation.

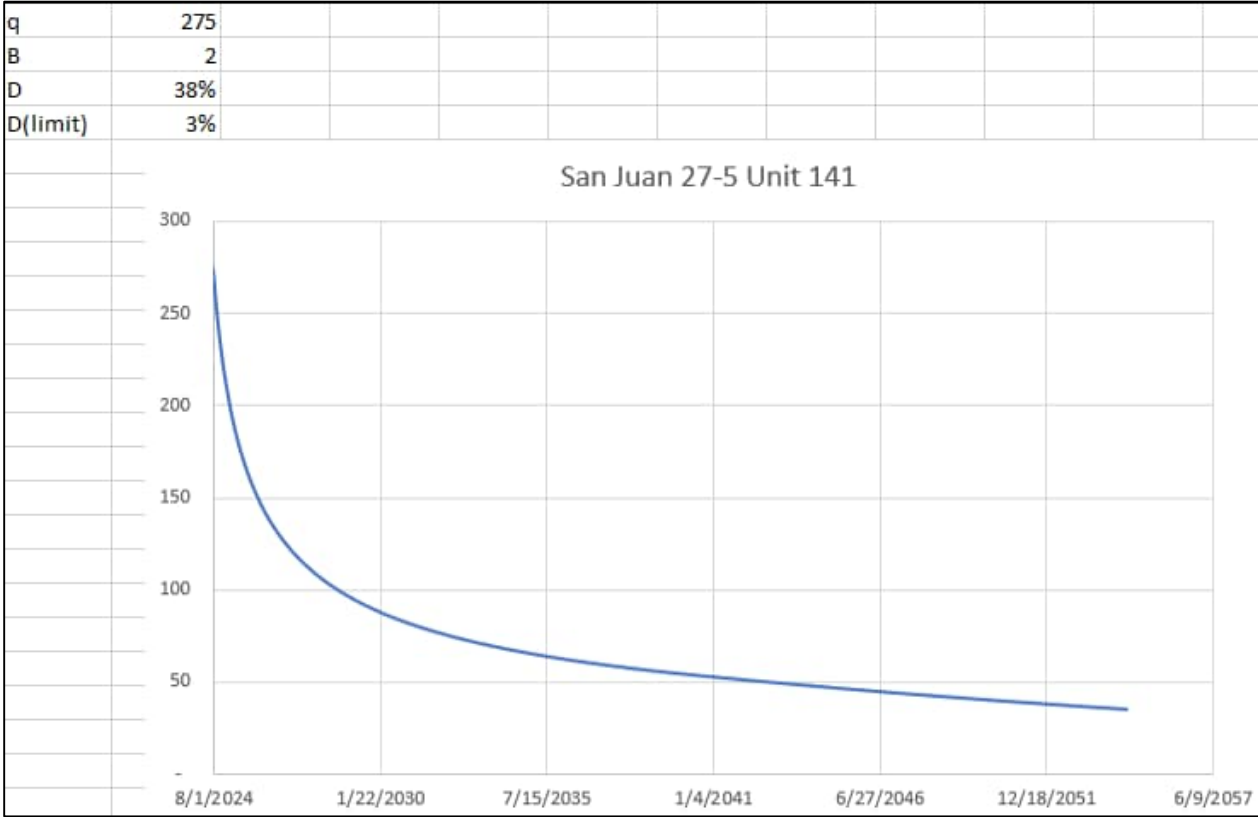
### Current Zone 1 Forecast – Dakota



Proposed Zone 1 Forecast - Mancos



Proposed Zone 2 Forecast - Mesaverde



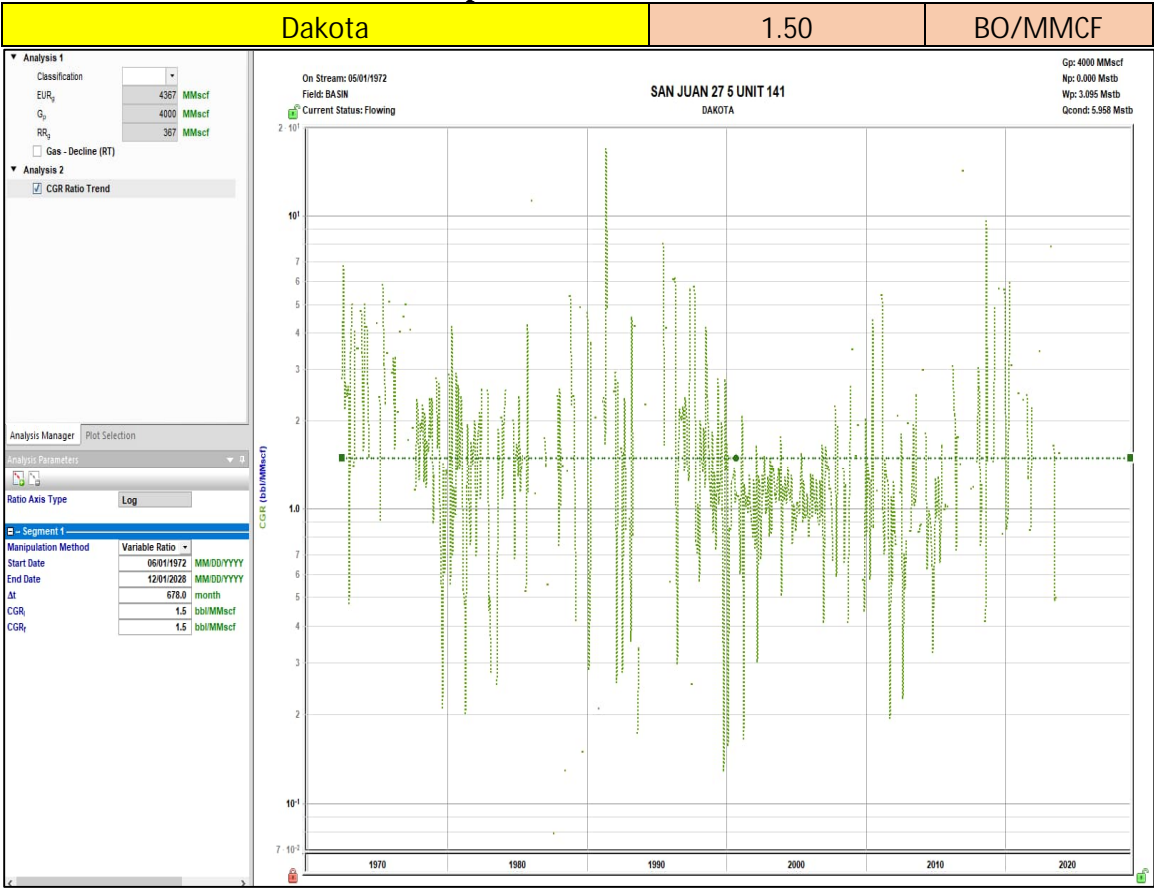
Average initial production curve in geologic region.

Oil Allocation:

Oil production will be allocated based on average formation yields from offset wells and will be a fixed rate for 4 years. After 4 years oil will be reevaluated and adjusted as needed based on average formation yields and new fixed gas allocation.

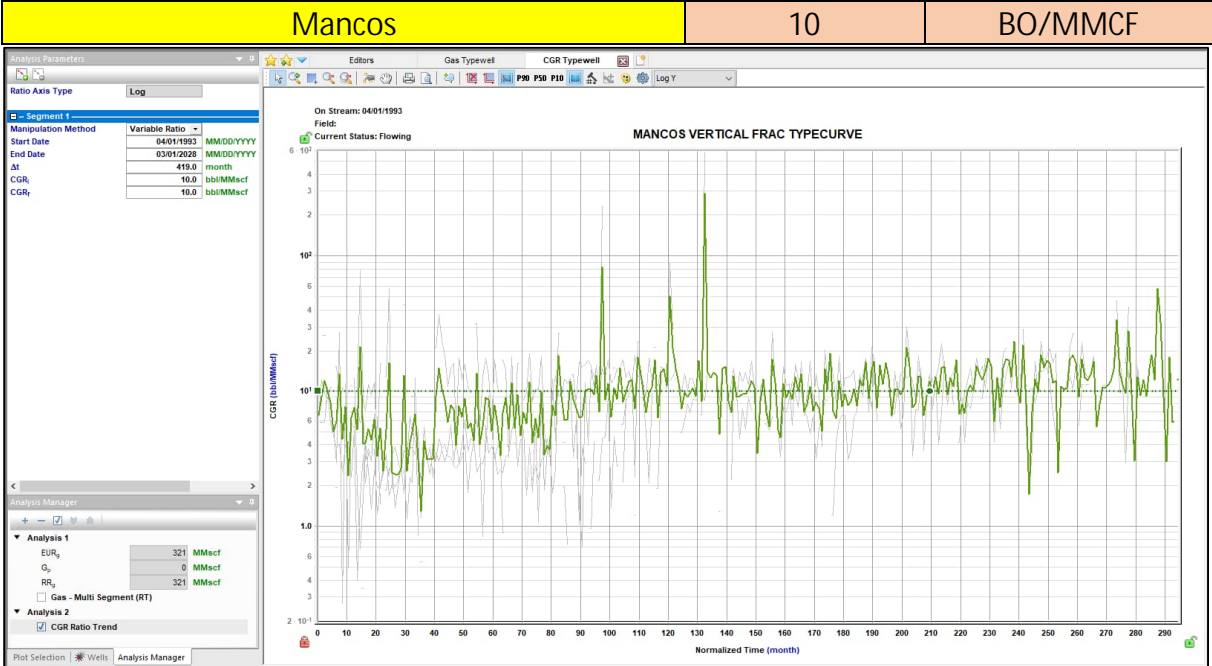
Formation	Yield (bbl/MM)	Remaining Reserves (MMcf)	% Oil Allocation
DK	1.50	367	7%
MC	10.00	321	41%
MV	5.38	749	52%

Current Zone – Dakota Oil Yield Map



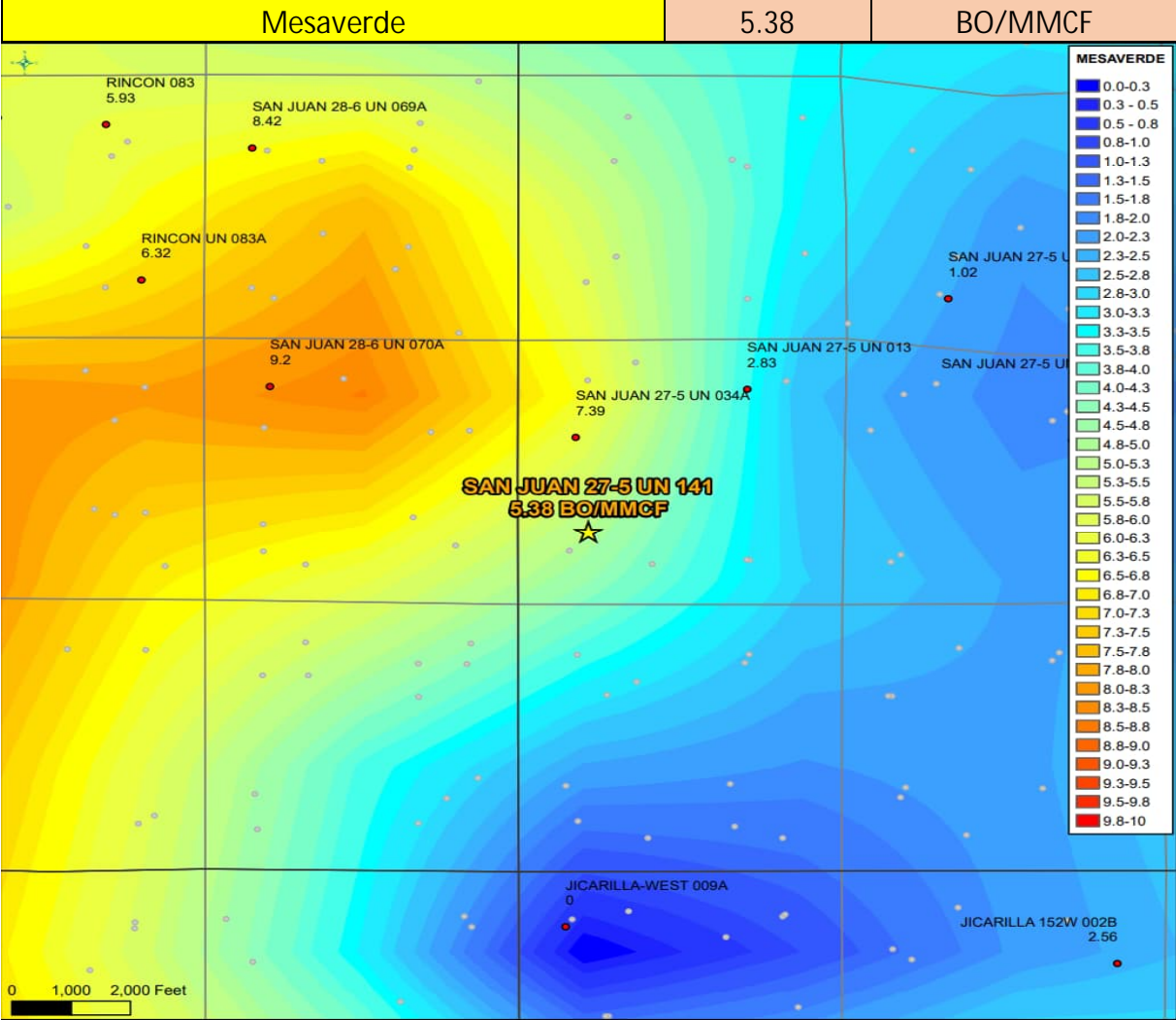
9-Section Area of Standalone Oil Yields. Sampled well to this map.

Proposed Zone 1 – Mancos Oil Yield



Average Oil Yield from Vertical Mancos Type Curve.

Proposed Zone 2 - Mesaverde Oil Yield Map



Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

COMMENTS

Action 325493

COMMENTS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 325493
	Action Type: [C-107] Down Hole Commingle (C-107A)

COMMENTS

Created By	Comment	Comment Date
llowe	12/19/24 under D.M. review of order.	12/19/2024

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CONDITIONS

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Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
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CONDITIONS

Created By	Condition	Condition Date
llowe	None	12/19/2024