

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: _____ OGRID Number: _____
 Well Name: _____ API: _____
 Pool: _____ Pool Code: _____

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]

A. Location – Spacing Unit – Simultaneous Dedication

☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]

[I] Commingling – Storage – Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

2) **NOTIFICATION REQUIRED TO:** Check those which apply.

- A. ☐ Offset operators or lease holders
 B. ☐ Royalty, overriding royalty owners, revenue owners
 C. ☐ Application requires published notice
 D. ☐ Notification and/or concurrent approval by SLO
 E. ☐ Notification and/or concurrent approval by BLM
 F. ☐ Surface owner
 G. ☐ For all of the above, proof of notification or publication is attached, and/or,
 H. ☐ No notice required

FOR OCD ONLY

- ☐ Notice Complete
☐ Application Content Complete

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name

_____ Date

_____ Phone Number

Signature

_____ e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240

District II
811 S. First St., Artesia, NM 88210

District III
1000 Rio Brazos Road, Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-107A
Revised August 1, 2011

APPLICATION TYPE
☐ Single Well
☐ Establish Pre-Approved Pools
EXISTING WELLBORE
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

Hilcorp Energy Company
Operator

382 Road 3100, Aztec, NM 87410
Address

East
Lease

4A
Well No.

I, 24, 31N, 12W
Unit Letter-Section-Township-Range

San Juan
County

OGRID No. 372171 Property Code 318503 API No. 30-045-22866 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Basin Fruitland Coal		Blanco Mesaverde
Pool Code	71629		72319
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2081 – 2493 – Estimated		4770 - 5025
Method of Production (Flowing or Artificial Lift)	New Zone		Artificial Lift
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	858 psi		1017 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1082 BTU		1233 BTU
Producing, Shut-In or New Zone	New Zone		Producing
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: Rates:	Date: Rates:	Date: Rates: Gas: 980 mcf Oil: 3 bbl Water: 0 bbl
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas See attachments	Oil Gas 	Oil Gas See attachments

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones?
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?

Yes ☒ No ☐
Yes ☐ No ☐

Are all produced fluids from all commingled zones compatible with each other?

Yes ☒ No ☐

Will commingling decrease the value of production?

Yes ☐ No ☒

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application?

Yes ☒ No ☐

NMOCDD Reference Case No. applicable to this well: _____


- Attachments:
- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
 - Production curve for each zone for at least one year. (If not available, attach explanation.)
 - For zones with no production history, estimated production rates and supporting data.
 - Data to support allocation method or formula.
 - Notification list of working, royalty and overriding royalty interests for uncommon interest cases.
 - Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

- List of other orders approving downhole commingling within the proposed Pre-Approved Pools
- List of all operators within the proposed Pre-Approved Pools
- Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
- Bottomhole pressure data.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE 

TITLE Operations/Regulatory Technician DATE 4/11/2022

TYPE OR PRINT NAME Amanda Walker

TELEPHONE NO. 346-237-2177

E-MAIL ADDRESS mwalker@hilcorp.com

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLATForm O-102
Supersedes O-129
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

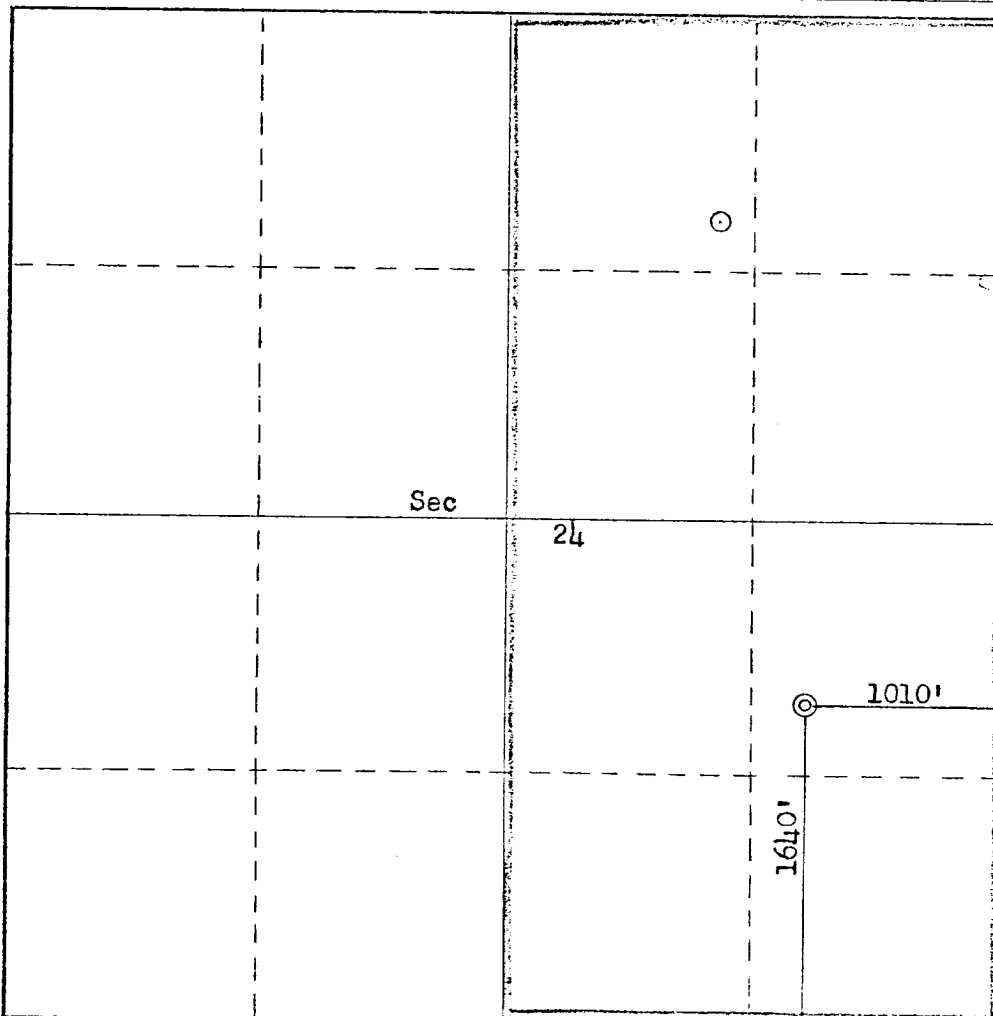
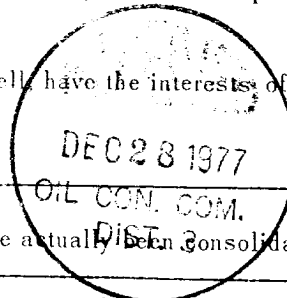
Operator Aztec Oil & Gas Company			Lessee East		Well No. 4A
Unit Letter I	Section 24	Township 31N	Range 12W	County San Juan	
Actual Portage Location of Well:					
1640 feet from the South line and		1010 feet from the East line			
Ground Level Elev. 5993	Producing Formation Mesa Verde	Pool Blanco	Dedicated Acreage 320 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to 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 _____

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

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



CERTIFICATION

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

Name _____
 Position _____
 Dist. Production Mgr.
 Company _____
 Aztec Oil & Gas Company
 Date _____
 December 19, 1977

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 knowledge and belief.

Date Surveyed _____
 December 1, 1977
 Registered Professional Engineer
 and/or Land Surveyor

 Fred B. Kerr Jr.

 Certificate No.
 3950

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-045-22866	2. Pool Code 71629	3. Pool Name BASIN FRUITLAND COAL (GAS)
4. Property Code 318503	5. Property Name East	6. Well No. 004A
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 5993

10. Surface Location

UL - Lot I	Section 24	Township 31N	Range 12W	Lot Idn	Feet From 1640	N/S Line S	Feet From 1010	E/W Line E	County SAN JUAN
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11. Bottom Hole Location If Different From Surface

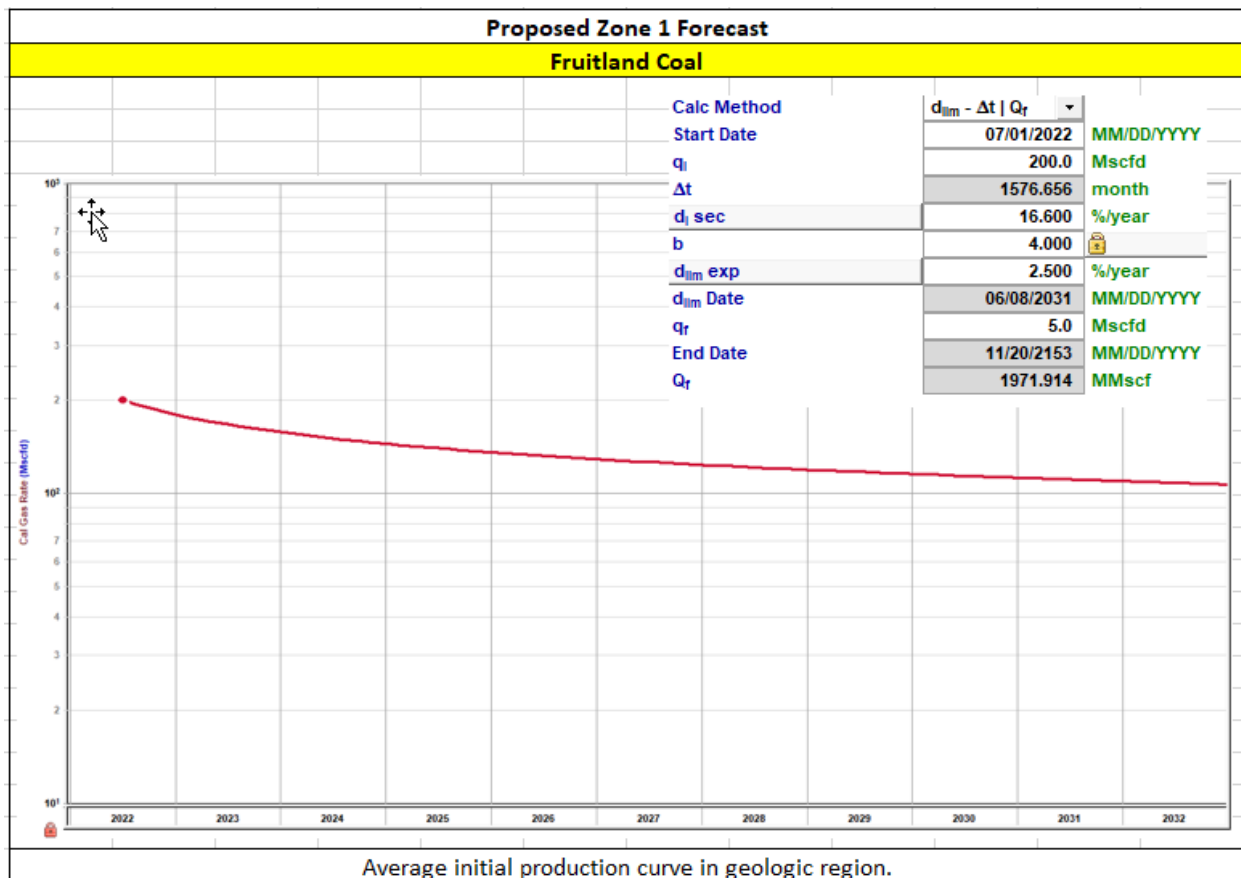
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
12. Dedicated Acres 320.00	13. Joint or Infill			14. Consolidation Code			15. Order No.		

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 align="center">OPERATOR CERTIFICATION</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: </p> <p>Title: Operation Regulatory Tech Sr.</p> <p>Date: 04/04/2022</p>
	<p align="center">SURVEYOR CERTIFICATION</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: Fred Kerr</p> <p>Date of Survey: 12/1/1977</p> <p>Certificate Number: 3950</p>

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 basinwide Moving-Domain Material Balance models that have proven to approximate the pressure in the given reservoirs well in this portion of the basin. These models were constructed incorporating reservoir dynamics and physics, historic production, and observed pressure data. Historic commingling operations have proven reservoir fluids are compatible.

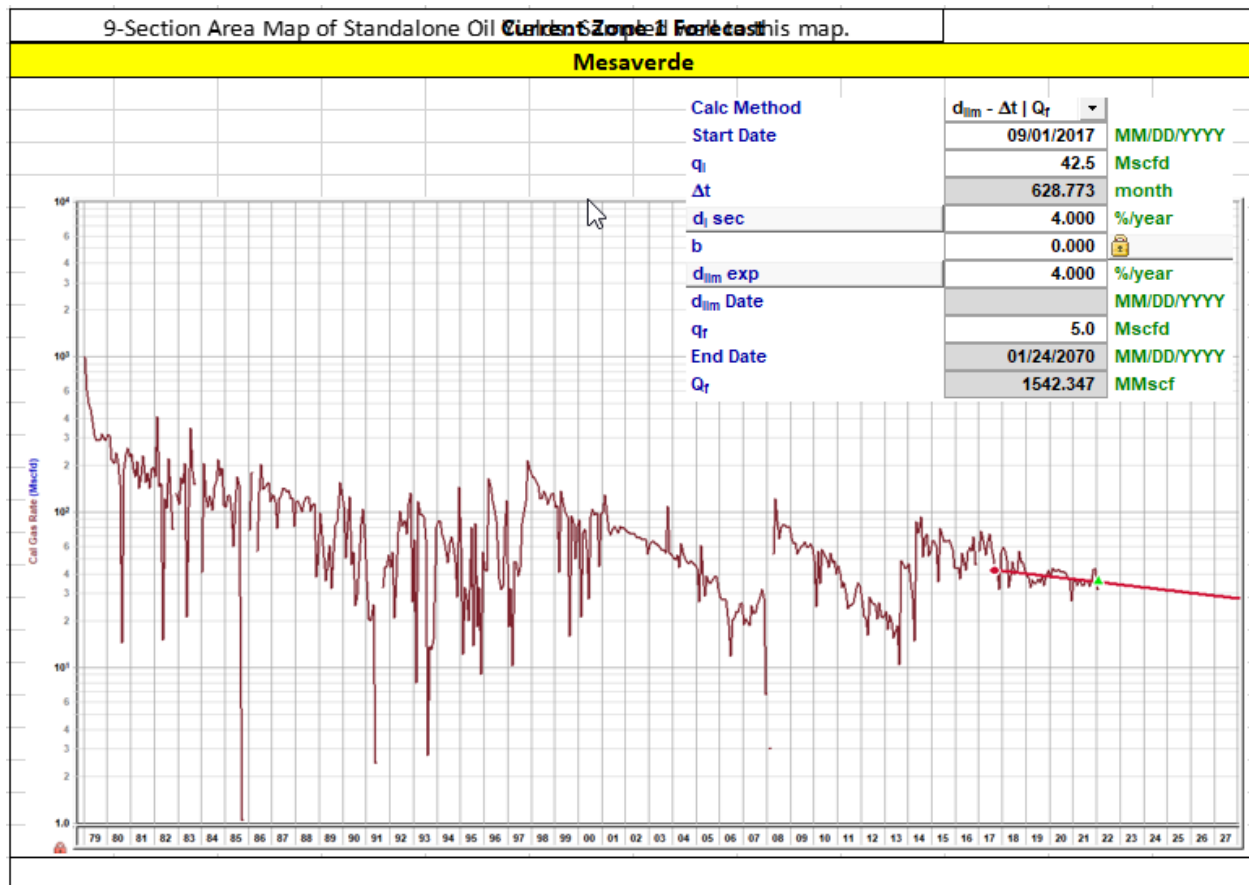


Production Allocation Method - Subtraction

Gas Allocation:

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

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

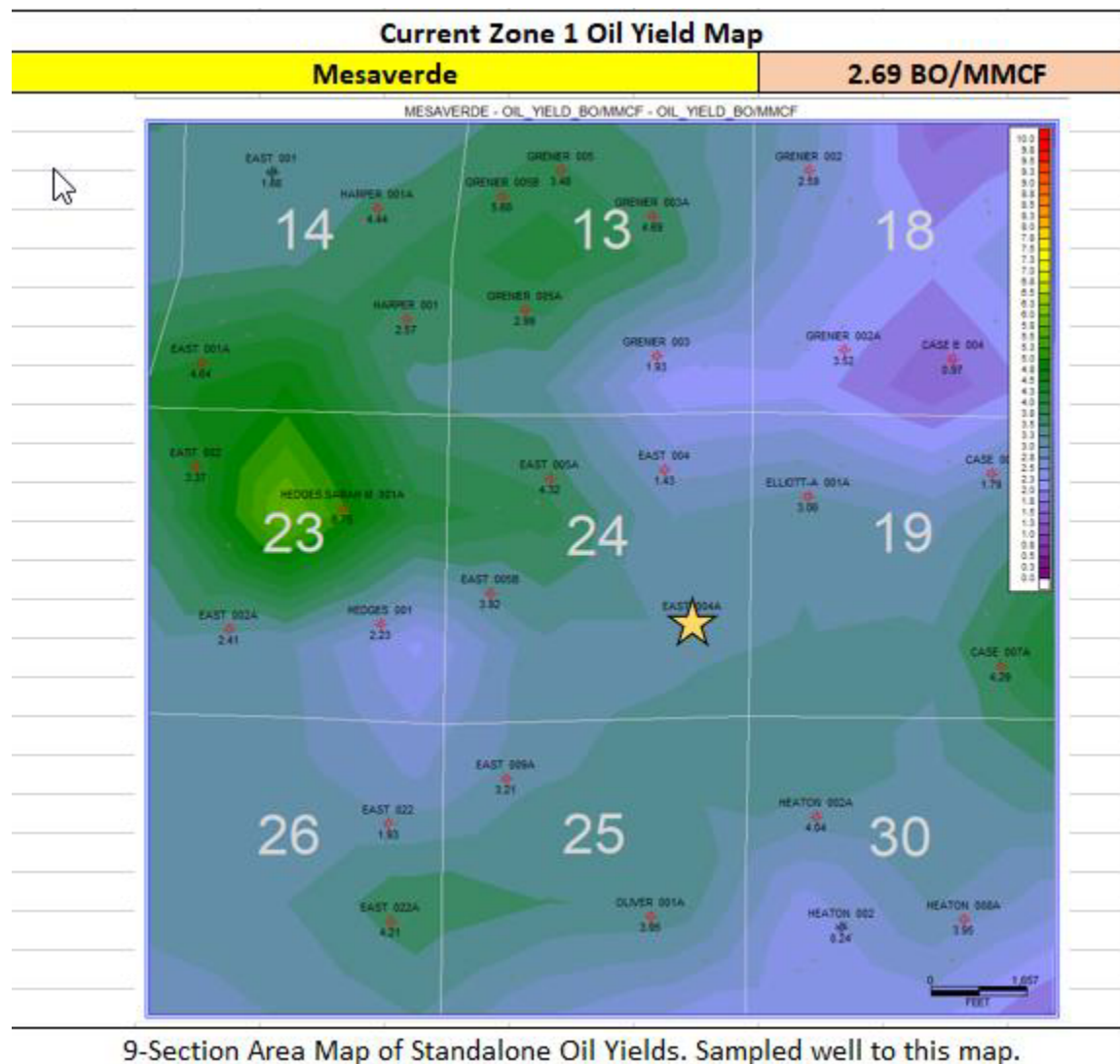


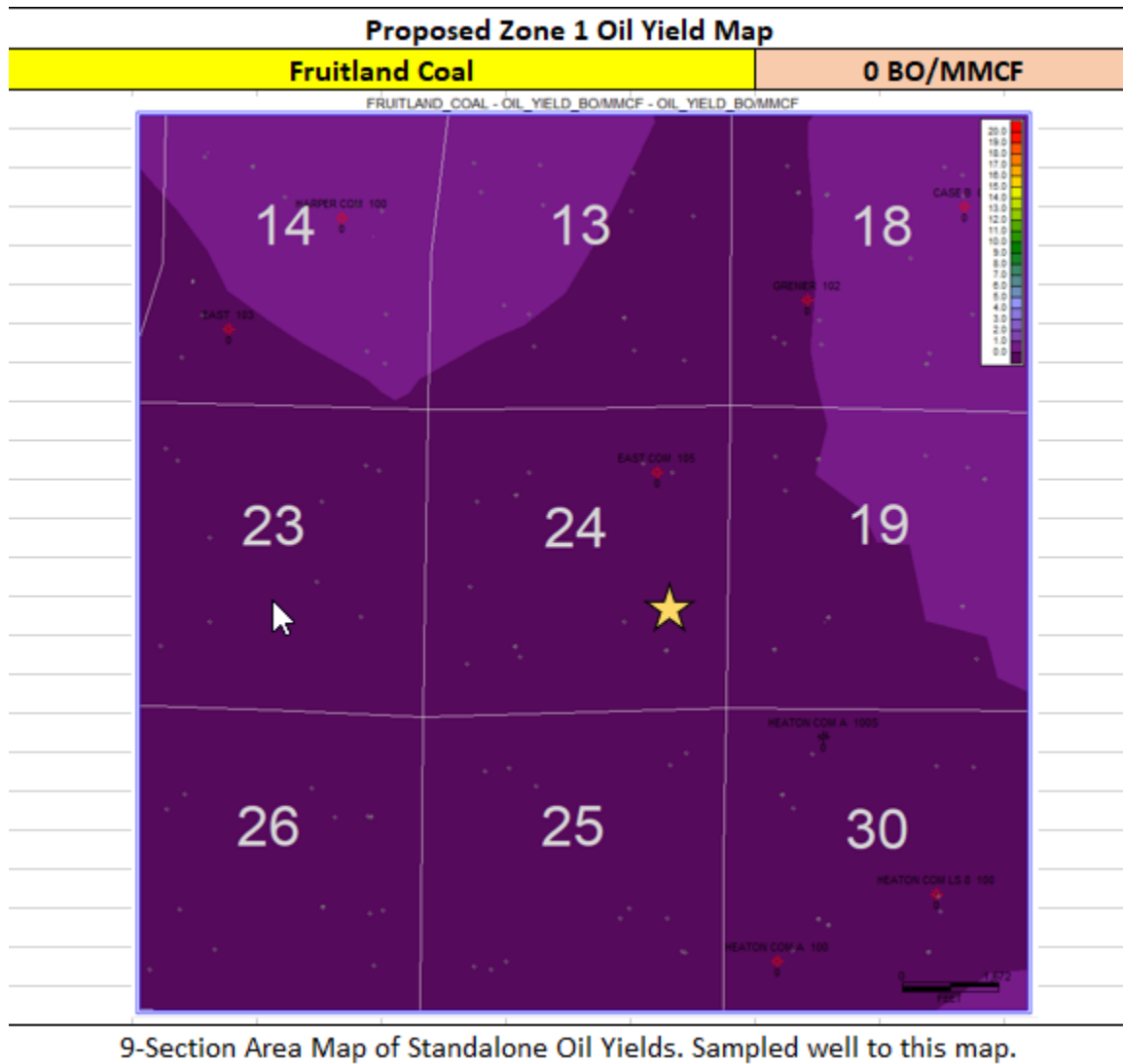
Oil Allocation:

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 adjust as needed based on average formation yields and new fixed gas allocation.

All documentation will be submitted to NMOCD.







March 29, 2022

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Application for Downhole Commingling
Well: EAST #004A
API: 3004522866
T31N - R12W - Section 24, Unit Letter: I
San Juan County, NM

Ladies and Gentlemen:

Concerning Hilcorp Energy Company's application to downhole commingle production in the subject well, this letter serves to confirm the following:

- All working, royalty and overriding royalty interests are identical between the **Blanco Mesaverde (72319)** and **Basin Fruitland Coal (71629)** as such relates to the prescribed spacing unit(s) being the **E/320**.

Pursuant to Subsection C.(1)(c) of 19.15.12.11, if the spacing unit(s) contains state, federal or tribal lands, Hilcorp will have provided notice via mail or sundry to the State Land Office and/or BLM as of the date of this letter.

If you have any questions or concerns regarding this matter, please do not hesitate to contact me at the email or number provided below.

Regards,

Hilcorp Energy Company

A handwritten signature in blue ink, appearing to read 'R. Carlson', is positioned above the printed name.

Robert T. Carlson
Sr. Landman
(832) 839-4596
rcarlson@hilcorp.com

1111 Travis Street Houston, TX 77002
Phone: (713) 209-2400 Fax: (713) 209-2420

Well Name: EAST	Well Location: T31N / R12W / SEC 24 / NESE / 36.881836 / -108.043488	County or Parish/State: SAN JUAN / NM
Well Number: 4A	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF077652	Unit or CA Name: EAST MV E/2 DEDICATION	Unit or CA Number: NMNM73152
US Well Number: 3004522866	Well Status: Producing Gas Well	Operator: HILCORP ENERGY COMPANY

Notice of Intent

Sundry ID: 2665157

Type of Submission: Notice of Intent

Type of Action: Recompletion

Date Sundry Submitted: 04/04/2022

Time Sundry Submitted: 12:11

Date proposed operation will begin: 05/02/2022

Procedure Description: Hilcorp Energy Company requests permission to recomplete the subject well in the Basin Fruitland Coal and downhole trimmingle with the existing Mesaverde/Pictured Cliffs. Please see the attached procedure, current and proposed wellbore diagram, plat and natural gas management plan. A closed loop system will be used. A pre-reclamation site visit was held on 3/30/2022 with Roger Herrera/BLM. The reclamation plan is attached.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

30045228660000_East_4A_NOI_FC_RC_20220404121041.pdf

Received by OCD: 4/11/2022 1:43:46 PM

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Well Name: EAST	Well Location: T31N / R12W / SEC 24 / NESE / 36.881836 / -108.043488	County or Parish/State: SAIN JUAN / NM
Well Number: 4A	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF077652	Unit or CA Name: EAST MV E/2 DEDICATION	Unit or CA Number: NMNM73152
US Well Number: 3004522866	Well Status: Producing Gas Well	Operator: HILCORP ENERGY COMPANY

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: AMANDA WALKER	Signed on: APR 04, 2022 12:11 PM
Name: HILCORP ENERGY COMPANY	
Title: Operations/Regulatory Technician	
Street Address: 1111 TRAVIS ST.	
City: HOUSTON	State: TX
Phone: (346) 237-2177	
Email address: mwalker@hilcorp.com	

Field Representative

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5055647742	BLM POC Email Address: krennick@blm.gov
Disposition: Approved	Disposition Date: 04/04/2022
Signature: Kenneth Rennick	



HILCORP ENERGY COMPANY
EAST 4A
FRUITLAND COAL RECOMPLETION SUNDRY

Prepared by:	Andrew Malone
Preparation Date:	March 28, 2022

WELL INFORMATION			
Well Name:	EAST 4A	State:	NM
API #:	3004522866	County:	SAN JUAN
Area:	03	Location:	1640' FSL & 1010' FEL - Unit I - Section 24 - T 031N - R 012W
Route:	0308	Latitude:	36.88184 N
Spud Date:	1/30/1978	Longitude:	-108.04347 W

PROJECT DESCRIPTION
Isolate the Mesaverde and Pictured Cliffs, perforate and stimulate the Fruitland Coal.

CONTACTS			
Title	Name	Office Phone #	Cell Phone #
Engineer	Andrew Malone	346-237-2370	832-335-8451
Area Foreman	Jeremy Brooks		947-3867
Lead	Wayne Peace		320-2532
Artificial Lift Tech	Jake Stockton		330-6450
Operator	Travis Taylor		787-6093



**HILCORP ENERGY COMPANY
EAST 4A
FRUITLAND COAL RECOMPLETION SUNDRY**

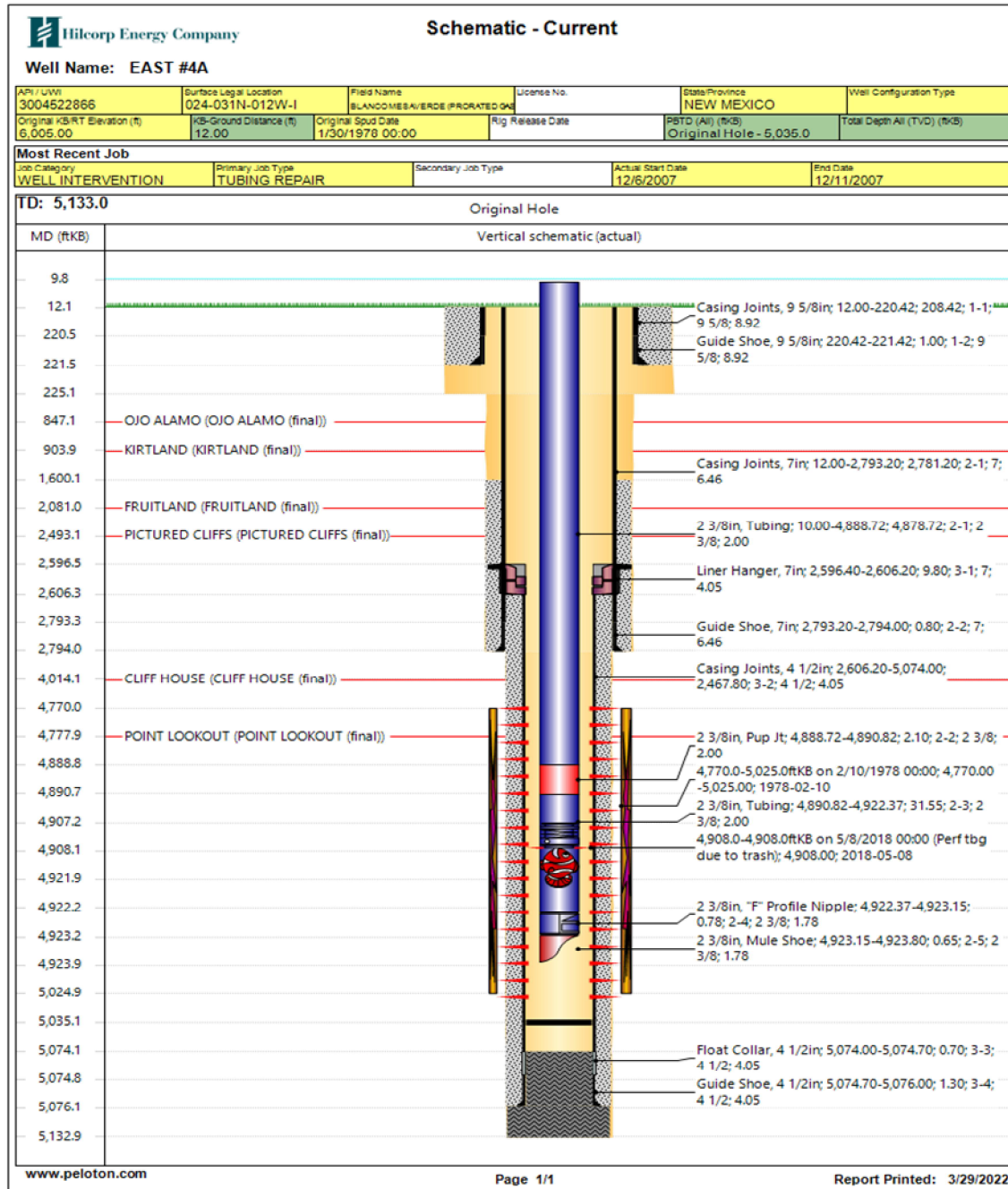
JOB PROCEDURES

1. MIRU service rig and associated equipment; NU and test BOP per HEC, State, and Federal guidelines.
2. TOOH with tubing.
3. Set a bridge plug above Mesaverde perforations (set between 4,720' and 4,770') for zonal isolation. Load hole with fluid.
4. RU E-line. Run cement bond log to verify TOC in 7" casing.
5. Rig up pressure test truck. Perform a Mechanical Integrity Test on wellbore. Chart record the MIT test (notify NMOCD +24hr before the actual test).
6. **If frac'ing down casing:** Pressure test to anticipated frac pressure, but do not exceed 80% of casing burst pressure.
7. RU E-line crew. Perforate the Fruitland Coal. Top perforation depth = 2,081'; Bottom perforation depth = 2,493'.
8. **If frac'ing down a frac string:** Run in hole with frac string and packer, and land packer above top Fruitland Coal perforation.
9. ND BOP, NU frac stack. Pressure test frac stack to frac pressure. Pressure test frac string to anticipated frac pressure. RDMO service rig.
10. RU stimulation crew. Frac the Fruitland Coal in one or more stages. Set bridge plugs between stages as needed.
11. Flowback well through flowback separator and sand trap until pressures diminish.
12. MIRU service rig. ND frac stack, NU BOP and test.
13. **If frac was performed down a frac string:** POOH w/ frac string and packer.
14. TIH with mill and clean out to Mesaverde isolation plug at 4,720' to 4,770'.
15. Once water and sand rates are acceptable, collect a gas sample from the Fruitland Coal.
16. Pending C107A approval, mill out isolation plugs above Mesaverde. Clean out to PBTD at 5,035. TOOH with cleanout assembly.
17. TIH and land production tubing. Run and set artificial lift components as needed. Put well on production from Fruitland Coal and Mesaverde



**HILCORP ENERGY COMPANY
EAST 4A
FRUITLAND COAL RECOMPLETION SUNDRY**

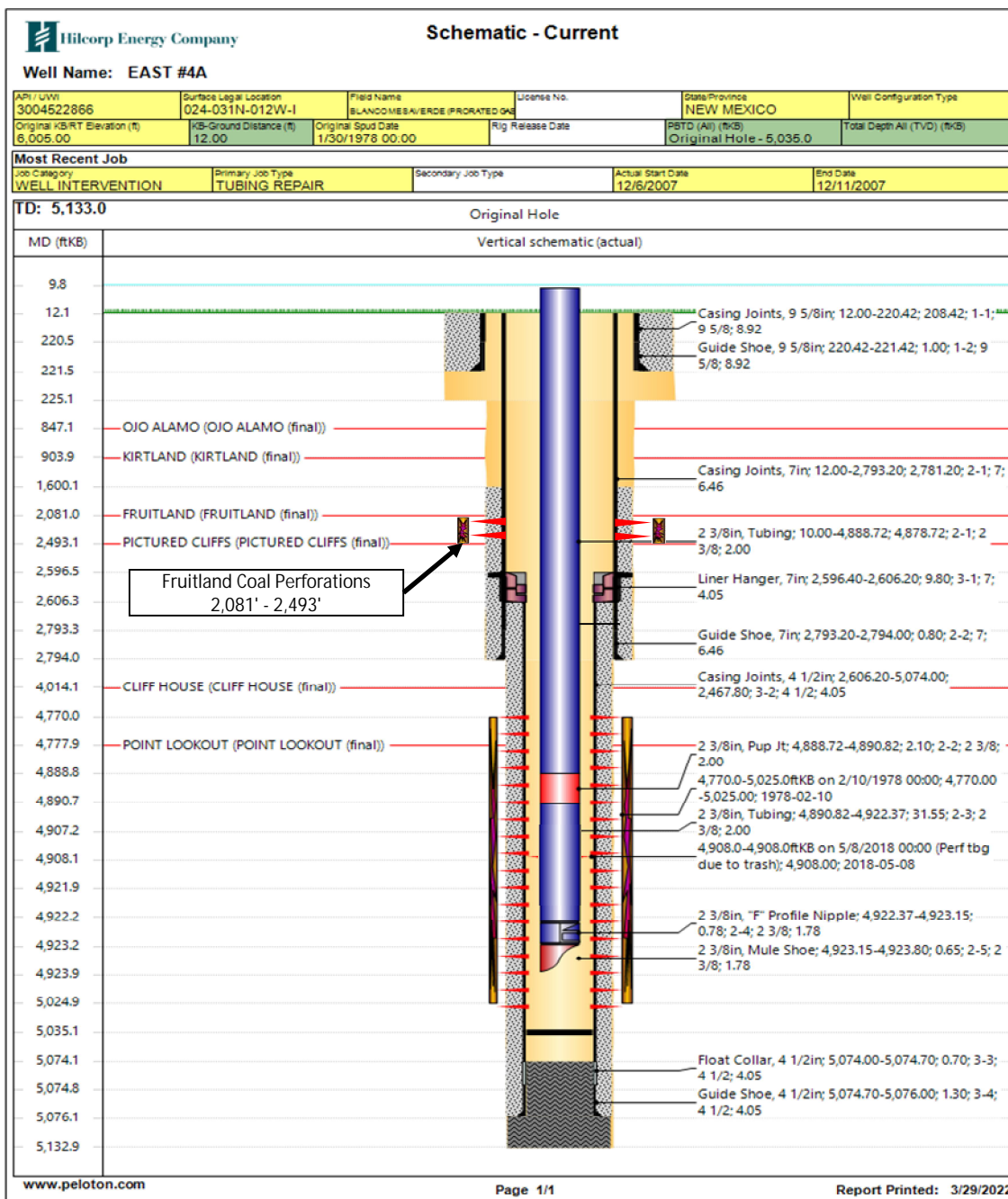
EAST 4A - CURRENT WELLBORE SCHEMATIC





**HILCORP ENERGY COMPANY
EAST 4A
FRUITLAND COAL RECOMPLETION SUNDRY**

EAST 4A - PROPOSED WELLBORE SCHEMATIC



District I
Received by OCD: 4/11/2022 1:43:46 PM
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
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Permit 313163

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-045-22866	2. Pool Code 71629	3. Pool Name BASIN FRUITLAND COAL (GAS)
4. Property Code 318503	5. Property Name East	6. Well No. 004A
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 5993

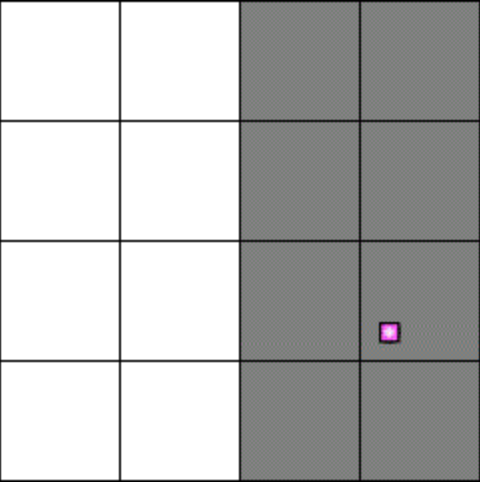

10. Surface Location

UL - Lot I	Section 24	Township 31N	Range 12W	Lot Idn	Feet From 1640	N/S Line S	Feet From 1010	E/W Line E	County SAN JUAN
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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 320.00	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>OPERATOR CERTIFICATION</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:  Title: Operation Regulatory Tech Sr. Date: 04/04/2022</p> <p>SURVEYOR CERTIFICATION</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: Fred Kerr Date of Survey: 12/1/1977 Certificate Number: 3950</p>
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Hilcorp Energy
Interim Reclamation Plan
East #4A
API: 30-045-22866
I – Sec.24-T031N-R012W
Lat: 36.88184, Long: -108.04347
Footage: 1640' FSL & 1010' FEL
San Juan County, NM

1. PRE- INTERIM RECLAMATION SITE INSPECTION

- 1.1) A pre-interim reclamation site inspection was completed by Roger Herrera with the BLM and Chad Perkins construction Foreman for Hilcorp Energy on March 30, 2022.

2. LOCATION INTERIM RECLAMATION PROCEDURE

- 2.1) Interim reclamation work will only be completed after well recompletion.
2.2) The interim reclamation work will be completed during spring or fall months.
2.3) Location tear drop will be re-defined as applicable for the interim reclamation.
2.4) All diversion ditches and silt traps will be cleaned and re-established as applicable for the interim reclamation.
2.5) All disturbed areas will be seeded, any disturbed areas that are compacted will be ripped before seeding.
2.6) All trash and debris will be removed within 50' buffer outside of the location disturbance during reclamation.

3. ACCESS ROAD RECLAMATION PROCEDURE:

- 3.1) No lease access road issues were identified at the time of onsite.

4. SEEDING PROCEDURE

- 4.1) A Pinion/Juniper seed mix will be used for all reclaimed and disturbed areas of the location.
4.2) Drill seeding will be done where applicable and all other disturbed areas will be broadcast seeded and harrowed, broadcast seeding will be applied at a double the rate of seed.
4.3) Timing of the seeding will take place when the ground is not frozen or saturated.

5. WEED MANAGEMENT

- 5.1) No action is required at this time for weed management, no noxious weeds were identified during the onsite.

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description Effective May 25, 2021

I. Operator: Hilcorp Energy Company **OGRID:** 372171 **Date:** 4/4/2022

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
EAST 4A	30-045-22866	I-24-31N-12W	1640 FSL 1010 FEL	0	200	1

IV. Central Delivery Point Name: Kutz Processing Plant [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
EAST 4A	<u>30-045-22866</u>					<u>2022</u>

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices


1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: 
Printed Name: Amanda Walker
Title: Operations/Regulatory Tech Sr.
E-mail Address: mwalker@hilcorp.com
Date: 4/4/2022
Phone: 346-237-2177
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

VI. Separation Equipment:

Hilcorp Energy Company (HEC or Operator) production facilities include separation equipment designed to efficiently separate gas from liquid phases to optimize gas capture based on projected and estimated volumes from the targeted pool of our recompleting project. HEC will utilize flowback separation equipment and production separation equipment designed and built to industry specifications after the recompleting to optimize gas capture and send gas to sales or flare based on analytical composition. HEC operates facilities that are typically one-well facilities. Production separation equipment is upgraded prior to well being completed, if determined to be undersized or inadequate. This equipment is already on-site and tied into our sales gas lines prior to the recompleting operations.

VII. Operational Practices:

1. Subsection (A) Venting and Flaring of Natural Gas
 - HEC understands the requirements of NMAC 19.15.27.8 which outlines that the venting and flaring of natural gas during drilling, completion or production operations that constitutes waste as defined in 19.15.2 are prohibited.
2. Subsection (B) Venting and Flaring during drilling operations
 - This gas capture plan isn't for a well being drilled.
3. Subsection (C) Venting and flaring during completion or recompleting
 - Flowlines will be routed for flowback fluids into a completion or storage tank and if feasible under well conditions, flare rather than vent and commence operation of a separator as soon as it is technically feasible for a separator to function.
 - At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.
4. Subsection (D) Venting and flaring during production operations
 - At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.
 - Monitor manual liquid unloading for wells on-site or in close proximity (<30 minutes' drive time), take reasonable actions to achieve a stabilized rate and pressure at the earliest practical time, and take reasonable actions to minimize venting to the maximum extent practicable.
 - HEC will not vent or flare except during the approved activities listed in NMAC 19.15.27.8 (D) 1-4.
5. Subsection (E) Performance standards
 - All tanks and separation equipment are designed for maximum throughput and pressure to minimize waste.
 - If a flare is utilized during production operations it will have a continuous pilot and is located more than 100 feet from any known well or storage tanks.
 - At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.

6. Subsection (F) Measurement or estimation of vented and flared natural gas
 - Measurement equipment is installed to measure the volume of natural gas flared from process piping.
 - When measurement isn't practicable, estimation of vented and flared natural gas will be completed as noted in 19.15.27.8 (F) 5-6.

VIII. Best Management Practices:

1. Operator has adequate storage and takeaway capacity for wells it chooses to recomplete as the flowlines at the sites are already in place and tied into a gathering system.
2. Operator will flare rather than vent vessel blowdown gas when technically feasible during active and/or planned maintenance to equipment on-site.
3. Operator combusts natural gas that would otherwise be vented or flared, when technically feasible.
4. Operator will shut in wells in the event of a takeaway disruption, emergency situation, or other operations where venting or flaring may occur due to equipment failures.

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

CONDITIONS

Action 96457

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 96457
	Action Type: [C-103] NOI Recompletion (C-103E)

CONDITIONS

Created By	Condition	Condition Date
kpickford	DHC required	4/8/2022
kpickford	Notify NMOCD 24 Hours Prior to beginning operations	4/8/2022

Formation	Yield (bbl/MM)	Remaining Reserves (MMcf)	% Oil Allocation
MV	2.69	272	100%
FRC	0	1238	0%
			100%

C-107A Pressure Revision: East 4A (3004522866)

Reservoir	Originally Submitted Pressure	Revised Bottom Hole Pressure
Fruitland Coal	858	98
Mesaverde	1017	174

The pressures originally provided were calculated far-field stabilized reservoir pressures based on a moving domain material balance simulation. The near wellbore shut-in bottom hole pressures of the Fruitland Coal and Mesaverde are much lower than the calculated far-field stabilized reservoir pressured due to the low permeability of the reservoirs. Based on pressure transient analysis performed in the San Juan Basin, it would take 7-25 years for shut-in bottom hole pressures to build up to the calculated far-field reservoir pressure. Our observation is that even for areas of high static reservoir pressures, the low permeability of the reservoir rock results in rapid depletion of the near-fracture region, quickly enough that the wells are unable to produce without the aid of a plunger. Given low permeabilities and low wellbore flowing pressures in the Fruitland Coal and Mesaverde loss of reserves due to cross-flow is not an issue during producing or shut-in periods. Given low shut-in bottom hole pressures, commingling the Fruitland Coal and Mesaverde in this well will not result in shut-in or flowing wellbore pressures in excess of any commingled pool's fracture parting pressure. The pressures provided in the revised C-107A are based on shut-in bottom hole pressures of offset standalone wells which match expected near-wellbore shut-in bottom hole pressures of this proposed commingled completion.

Please see the representative gas and water samples for each pool in the requested East 4A DHCs.

Water Compatibility in the San Juan Basin

- The San Juan basin has productive siliciclastic reservoirs (Pictured Cliffs, Blanco Mesaverde, Basin Dakota, etc.) and a productive coalbed methane reservoir (Basin Fruitland Coal).
- These siliciclastic and coalbed methane reservoirs are commingled extensively throughout the basin in many different combinations with no observed damage from clay swelling due to differing formation waters.
- The Basin Fruitland Coal, Blanco Mesaverde, and Blanco Pictured Cliffs a samples below all show fresh water with low TDS.

MV Gas Analysis							
AssetCode	AssetName	BTUWet	BTUDry	SpecificHeatRatio	Viscosity	SpecificGravity	CO2
3004510712	HARPER 1		1256.63			0.73	0.01

MV Water Analysis							
API	Property	CationBarium	CationBoron	CationCalcium	CationIron	CationMagnesium	CationManganese
3004510712	HARPER 1	0		0.5	1.3	0.15	0.01

FRC Gas Analysis							
AssetCode	AssetName	BTUWet	BTUDry	SpecificHeatRatio	Viscosity	SpecificGravity	CO2
3004534509	CRANDELL COM 501S		984.45			0.61	0.04

FRC Water Analysis							
API	Property	CationBarium	CationBoron	CationCalcium	CationIron	CationMagnesium	CationManganese
3004534509	CRANDELL COM 501S	2.58		7.88	18.98	5.61	0.22

N2	C1	C2	C3	ISOC4	NC4	ISOC5	NC5	
0		0.8	0.1	0.05	0.01	0.01	0	0

CationPhosphorus	CationPotassium	CationStrontium	CationSodium	CationSilica	CationZinc	CationAlumi	CationCopper
		0	1176.2				

N2	C1	C2	C3	ISOC4	NC4	ISOC5	NC5	
0		0.94	0.01	0.01	0	0	0	0

CationPhosphorus	CationPotassium	CationStrontium	CationSodium	CationSilica	CationZinc	CationAlumi	CationCopper
		1.51	1130.76				

NEOC5	C6	C6_PLUS	C7	C8	C9	C10	AR
		0		0	0	0	0

CationLead	CationLithiun	CationNickel	CationCobalt	CationChromiu	CationSilicon	CationMolybde	AnionChloride
							1500

NEOC5	C6	C6_PLUS	C7	C8	C9	C10	AR
		0		0	0	0	0

CationLead	CationLithiun	CationNickel	CationCobalt	CationChromiu	CationSilicon	CationMolybde	AnionChloride
							1275.4

CO	H2	O2	H2O	H2S	0
----	----	----	-----	-----	---

AnionCarbonate	AnionBicarbonate	AnionBromide	AnionFluoride	AnionHydroxyl	AnionNitrate	AnionPhosphat	AnionSulfate
0	524.6					68.3	20

CO	H2	O2	H2O	H2S	0
----	----	----	-----	-----	---

AnionCarbonate	AnionBicarbonate	AnionBromide	AnionFluoride	AnionHydroxyl	AnionNitrate	AnionPhosphat	AnionSulfate
0				0			0

phField	phCalculated	TempField	TempLab	OtherField	OtherSpecificGravity	OtherTDS	OtherCaCO3	OtherConducti
8.4	7.79			953.16	1.01	2912	18.02	

phField	phCalculated	TempField	TempLab	OtherField	OtherSpecificGravity	OtherTDS	OtherCaCO3	OtherConducti
7.95		68			1	3154.47		4928.86

DissolvedCO2	DissolvedO2	DissolvedH2S
	50	7

DissolvedCO2	DissolvedO2	DissolvedH2S
120		0.37

From: [McClure, Dean, EMNRD](#) on behalf of [Engineer, OCD, EMNRD](#)
To: [Mandi Walker](#); [Kandis Roland](#)
Cc: [McClure, Dean, EMNRD](#); [Wrinkle, Justin, EMNRD](#); [Powell, Brandon, EMNRD](#); lisa@rwbyram.com; [Paradis, Kyle O](#)
Subject: Approved Administrative Order DHC-5198
Date: Friday, October 14, 2022 1:08:47 PM
Attachments: [DHC5198 Order.pdf](#)

NMOCD has issued Administrative Order DHC-5198 which authorizes Hilcorp Energy Company (372171) to downhole commingle production within the following well:

Well Name: [East #4A](#)
Well API: [30-045-22866](#)

The administrative order is attached to this email and can also be found online at OCD Imaging.

Please review the content of the order to ensure you are familiar with the authorities granted and any conditions of approval. If you have any questions regarding this matter, please contact me.

Dean McClure
Petroleum Engineer, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
(505) 469-8211

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

**APPLICATION FOR DOWNHOLE COMMINGLING
SUBMITTED BY HILCORP ENERGY COMPANY**

ORDER NO. DHC-5198

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 Company ("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 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.
4. Applicant has certified that all produced fluids from all the Pools are compatible with each other.
5. Applicant has certified that downhole commingling the Pools will not decrease the value of the oil and gas production.
6. To the extent that ownership is identical, Applicant submitted a certification by a licensed attorney or qualified petroleum landman that ownership in the Pools is identical as defined by 19.15.12.7(B) NMAC.
7. To the extent that ownership is diverse, Applicant identified all owners of interest in the Pools, provided evidence a copy of the Application was given to each person, and those persons either submitted a written waiver or did not file an objection to the Application.
8. 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

9. 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.
10. 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.

11. 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.
12. Applicant's proposed method of allocation, as modified herein, complies with 19.15.12.11(A)(8) NMAC.
13. To the extent that ownership is diverse, Applicant identified all owners of interest in the Pools and provided evidence the application was given to those persons in accordance with 19.15.12.11(C)(1)(b) NMAC.
14. 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. 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. zero percent (0%) shall be allocated to the BASIN FRUITLAND COAL (GAS) pool (pool ID: 71629); and
 - b. one hundred percent (100%) shall be allocated to the BLANCO-MESAVERDE (PRORATED GAS) pool (pool ID: 72319).

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 BASIN FRUITLAND COAL (GAS) pool (pool ID: 71629).

The current pool(s) are:

- a. the BLANCO-MESAVERDE (PRORATED GAS) pool (pool ID: 72319).

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.

3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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).
9. 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**



**ADRIENNE E. SANDOVAL
DIRECTOR**

DATE: 10/13/2022

State of New Mexico
Energy, Minerals and Natural Resources Department

Exhibit A

Order: **DHC-5198**

Operator: **Hilcorp Energy Company (372171)**

Well Name: **East #4A**

Well API: **30-045-22866**

Upper Zone	Pool Name: BASIN FRUITLAND COAL (GAS)		
	Pool ID: 71629	Current:	New: X
	Allocation:	Oil: 0%	Gas:
	Interval: Perforations	Top: 2,081	Bottom: 2,493
Intermediate Zone	Pool Name:		
	Pool ID:	Current:	New:
	Allocation:	Oil:	Gas:
	Interval:	Top:	Bottom:
Bottom of Interval within 150% of Upper Zone's Top of Interval:			
Lower Zone	Pool Name: BLANCO-MESAVERDE (PRORATED GAS)		
	Pool ID: 72319	Current: X	New:
	Allocation:	Oil: 100%	Gas:
	Interval: Perforations	Top: 4,770	Bottom: 5,025
Bottom of Interval within 150% of Upper Zone's Top of Interval: NO			

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CONDITIONS

Action 97403

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 97403
	Action Type: [C-107] Down Hole Commingle (C-107A)

CONDITIONS

Created By	Condition	Condition Date
dmcclure	Please review the content of the order to ensure you are familiar with the authorities granted and any conditions of approval. If you have any questions regarding this matter, please contact me.	10/14/2022