Revised March 23, 2017

| RECEIVED: | REVIEWER: | TYPE: | APP NO: |
|---|---|---|---|

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

**FOR OCD ONLY**
☐ Notice Complete
☐ Application Content Complete

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

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.**

_____ Date

_____ Print or Type Name

_____ 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
__X__Yes ____No

# APPLICATION FOR DOWNHOLE COMMINGLING

| Hilcorp Energy Company | | 382 Road 3100, Aztec, NM 87410 | |
|---|---|---|---|
| Operator | | Address | |
| Howell C | 4 | M,18,30N,08W | San Juan |
| Lease | Well No. | Unit Letter-Section-Township-Range | County |

OGRID No. 372171 Property Code 318563 API No. 30-045-09435 Lease Type: X Federal ____State ____Fee

| DATA ELEMENT | UPPER ZONE | INTERMEDIATE ZONE | LOWER ZONE |
|---|---|---|---|
| Pool Name | Basin Fruitland Coal | | Blanco Mesaverde |
| Pool Code | 71629 | | 71599 |
| Top and Bottom of Pay Section (Perforated or Open-Hole Interval) | 2590' - 3080' | | 3820' - 5340' |
| Method of Production (Flowing or Artificial Lift) | Artificial Lift | | 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) | 104 psi | | 123 psi |
| Oil Gravity or Gas BTU (Degree API or Gas BTU) | 1131 BTU | | 1256 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:<br>Rates: | Date:<br>Rates: | Date: 4/1/2023<br>Rates: Oil: 0 BBLS<br>Gas: 2646 mcf<br>Water: 29 BBLS |
| 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 % | Oil % Gas % | Oil % Gas % |

## ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes X No
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes____ No____

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

Will commingling decrease the value of production? Yes____ No X

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 X No____

NMOCD Reference Case No. applicable to this well: _____

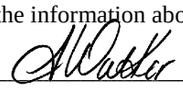
Attachments:
C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
Production curve for each zone for at least one year. (If not available, attach explanation.)
For zones with no production history, estimated production rates and supporting data.
Data to support allocation 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 Operation Regulatory Tech Sr. DATE 6/26/2023

TYPE OR PRINT NAME Amanda Walker TELEPHONE NO. ( 346 ) 237-2177

E-MAIL ADDRESS mwalker@hilcorp.com

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-128
Rev. 5/1/57

W Location and Acreage Dedicatic Plat

Section A.

Date JUNE 25, 1957

Operator EL PASO NATURAL GAS COMPANY Lease HOWELL "C" SF 078596

Well No. 4 Unit Letter M Section 18 Township 30-N Range 8-W NMPM

Located 933 Feet From SOUTH Line, 931 Feet From WEST Line

County SAN JUAN G.L. Elevation 6322 Dedicated Acreage 334.96 Acres

Name of Producing Formation MESA VERDE Pool BLANCO

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below?

Yes _____ No X

2. If the answer to question one is "no", have the interests of all the owners been consolidated by communitization agreement or otherwise? Yes X No _____ If answer is "yes," Type of Consolidation Communitization Agreement.

3. If the answer to question two is "no," list all the owners and their respective interests below

| Owner | Land Description |
|---|---|
| | |
| | |
| | |

RECEIVED
AUG 12 1957
OIL CON. COM.
DIST. 3

RECEIVED
AUG
L. SURVEY

Section B

This is to certify that the information in Section A above is true and complete to the best of my knowledge and belief.

~~El Paso Natural Gas Company~~ (Operator)

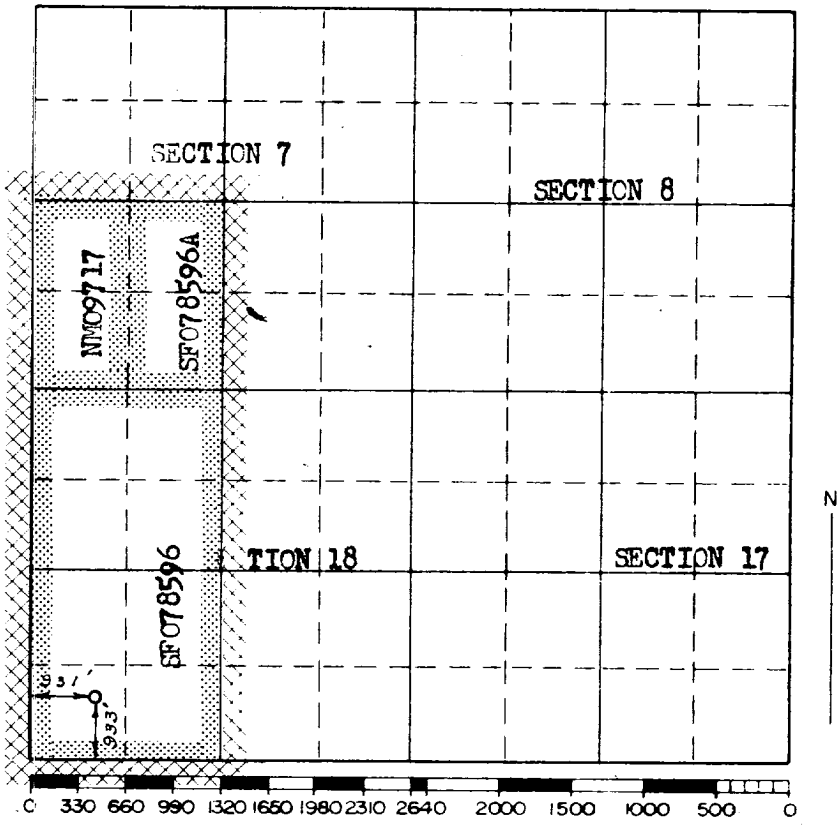
Original Signed D. C. Johnston
(Representative)

~~Box 997~~ Address

~~Farmington, New Mexico~~

NOTE: THIS PLAT IS RE-ISSUED TO SHOW CORRECTED FOOTAGES.

Note: All distances must be from outer boundaries of section.




Scale 2 inches equal 1 mile

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.

Date Surveyed MAY 31, 1957

(Seal)

Farmington, New Mexico

C. O. Walker
Registered Professional Engineer and/or Land Surveyor

**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 340598

## WELL LOCATION AND ACREAGE DEDICATION PLAT

| 1. API Number | 2. Pool Code | 3. Pool Name |
|---|---|---|
| 30-045-09435 | 71629 | BASIN FRUITLAND COAL (GAS) |
| **4. Property Code** | **5. Property Name** | **6. Well No.** |
| 318563 | HOWELL C | 004 |
| **7. OGRID No.** | **8. Operator Name** | **9. Elevation** |
| 372171 | HILCORP ENERGY COMPANY | 6320 |

### 10. Surface Location

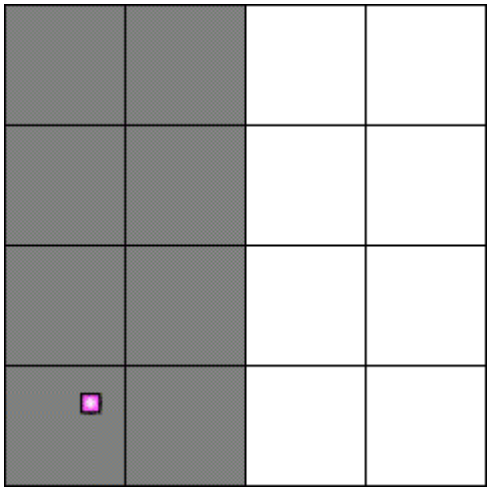
| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 18 | 30N | 08W | 4 | 933 | S | 931 | W | SAN JUAN |

### 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 | 13. Joint or Infill | 14. Consolidation Code | 15. Order No. |
|---|---|---|---|
| 334.94 | | | |

**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**



### OPERATOR CERTIFICATION

*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.*

E-Signed By:
Title: Operations Regulatory Tech Sr.
Date: 5/16/2023

### SURVEYOR CERTIFICATION

*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.*

Surveyed By: C. O. Walker
Date of Survey: 5/31/1957
Certificate Number: 1007

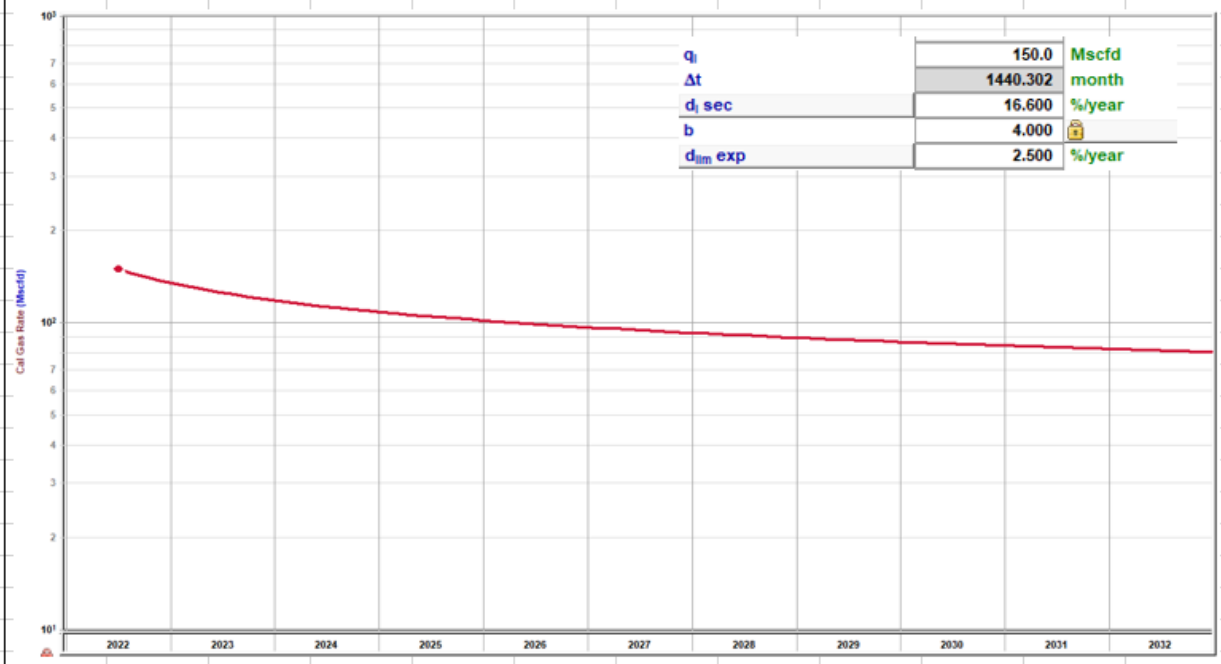
The near wellbore shut-in bottom hole pressures of the above reservoirs are much lower than the calculated far-field stabilized reservoir pressured due to the low permeability of the reservoirs. Based on pressure transient analysis performed in the San Juan Basin, it would take 7-25 years for shut-in 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 above reservoirs, 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 above reservoirs 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 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.

Note: BTU Data taken from standalone completions in the zone of interest within a 2 mile radius of the well.

A farther radius is used if there is not enough data for a proper statistical analysis.

**Proposed Zone 1 Forecast**

**Fruitland Coal**




Average initial production curve in geologic region.

**HEC Comments**

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.

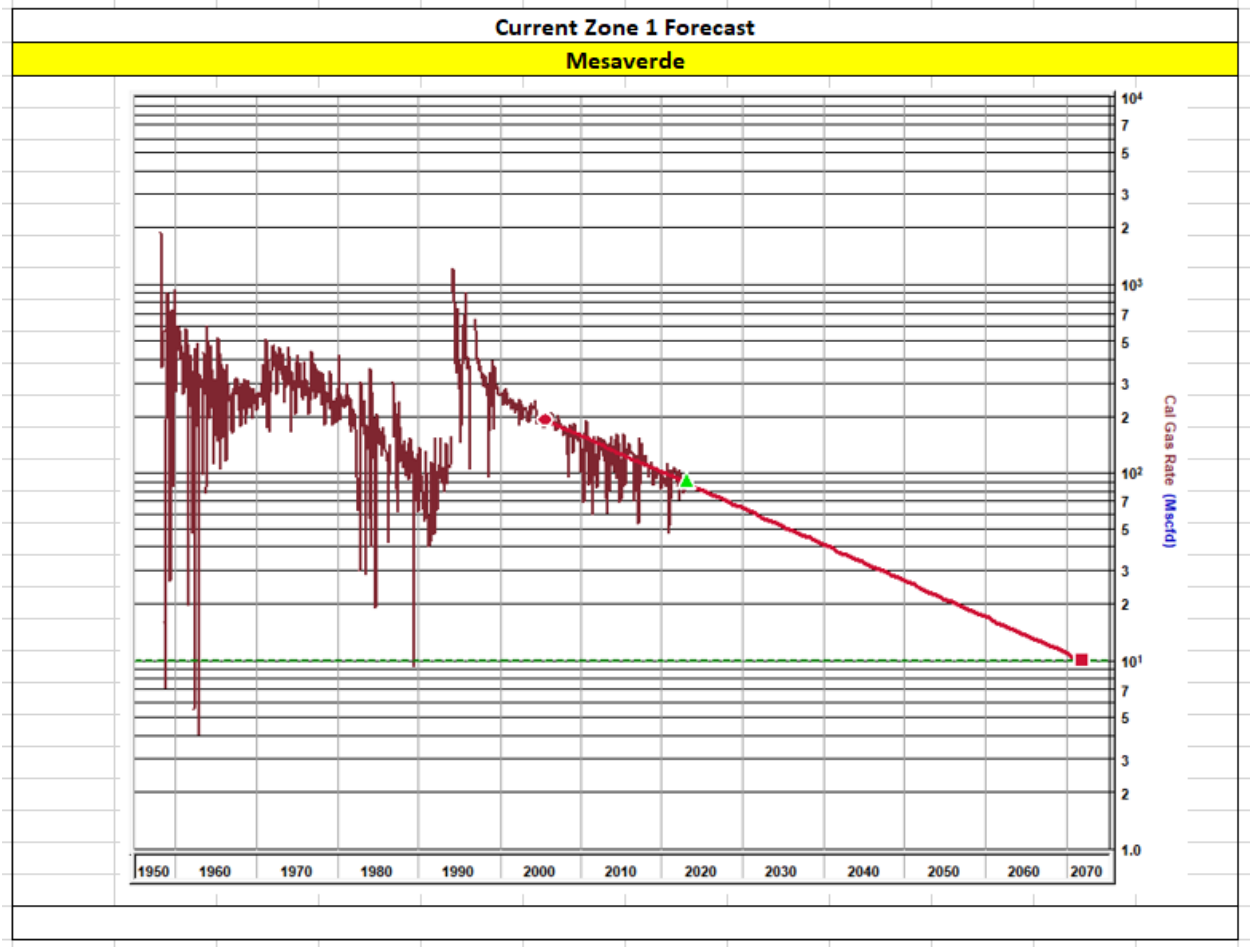
The BHPs of all zones, producing and non-producing, were estimated based upon basinwide Moving-Domain Material Balance models that have proven to approximate the pressure in the given reservoirs well in this portion of the basin. These models were constructed incorporating reservoir dynamics and physics, 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:**

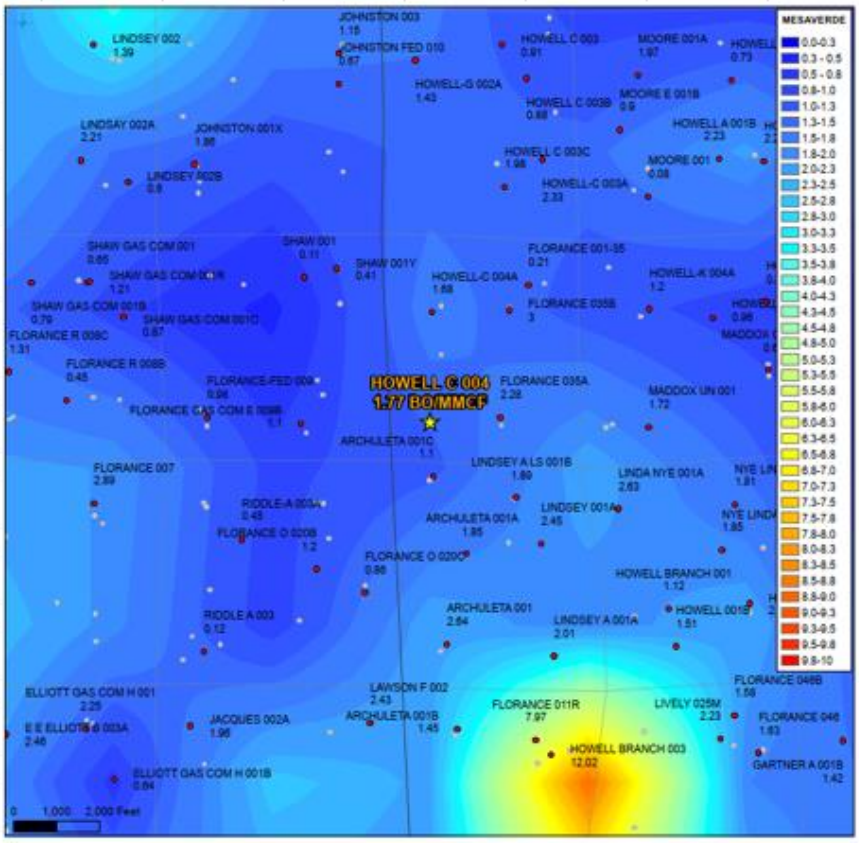
Oil production will be allocated based on average formation yields from offset wells and will be a fixed rate for 4 years.

After 4 years oil will be reevaluated and adjust as needed based on average formation yields and new fixed gas allocation.

| Formation | Yield (bbl/MM) | Remaining Reserves (MMcf) | % Oil Allocation |
|---|---|---|---|
| MV | 1.77 | 639 | 86% |
| FRC | 0.2 | 917 | 14% |
| | | | 100% |

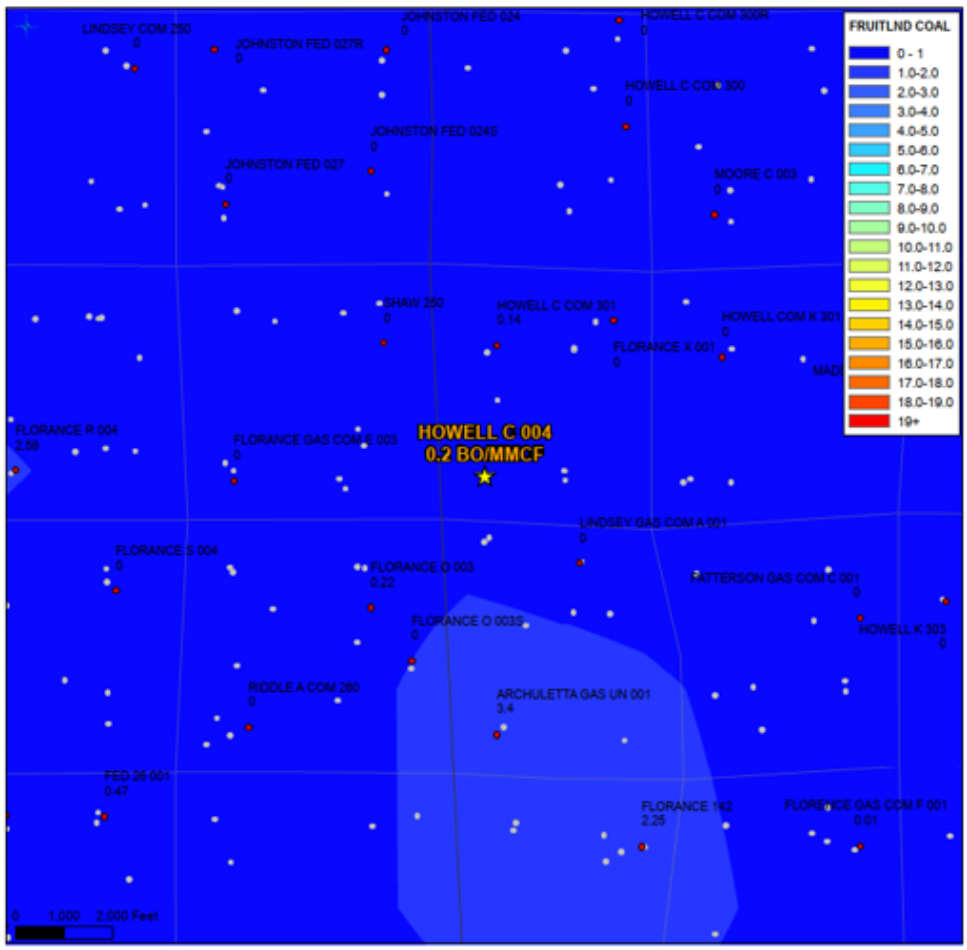
All documentation will be submitted to NMOCD.

| Current Zone 1 Oil Yield Map | | |
|---|---|---|
| Mesaverde | 1.77 | BO/MMCF |




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

| Proposed Zone 1 Oil Yield Map | | |
|---|---|---|
| Fruitland Coal | 0.2 | BO/MMCF |




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

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 samples below all show fresh water with low TDS.

| Well Name | API |
|---|---|
| Howell C 4 | 3004509435 |

| FRC Offset | | MV Offset | |
|---|---|---|---|
| API | 3004526897 | API | 3004534736 |
| Property | HOWELL K 300 | Property | RIDDLE A 2B |
| CationBarium | 14.2 | CationBarium | 2 |
| CationBoron | | CationBoron | |
| CationCalcium | 14 | CationCalcium | 56 |
| CationIron | 0 | CationIron | 82 |
| CationMagnesium | 14 | CationMagnesium | 9.8 |
| CationManganese | 0.5 | CationManganese | 2.35 |
| CationPhosphorus | | CationPhosphorus | |
| CationPotassium | | CationPotassium | |
| CationStrontium | 7.9 | CationStrontium | 0 |
| CationSodium | 773.56 | CationSodium | 125.5 |
| CationSilica | | CationSilica | |
| CationZinc | | CationZinc | |
| CationAluminum | | CationAluminum | |
| CationCopper | | CationCopper | |
| CationLead | | CationLead | |
| CationLithium | | CationLithium | |
| CationNickel | | CationNickel | |
| CationCobalt | | CationCobalt | |
| CationChromium | | CationChromium | |
| CationSilicon | | CationSilicon | |
| CationMolybdenum | | CationMolybdenum | |
| AnionChloride | 400 | AnionChloride | 800 |
| AnionCarbonate | 0 | AnionCarbonate | 0 |
| AnionBicarbonate | 1364 | AnionBicarbonate | 378.2 |
| AnionBromide | | AnionBromide | |
| AnionFluoride | | AnionFluoride | |
| AnionHydroxyl | 0 | AnionHydroxyl | |
| AnionNitrate | | AnionNitrate | |
| AnionPhosphate | | AnionPhosphate | 81.6 |
| AnionSulfate | 108 | AnionSulfate | 130 |
| phField | 7.21 | phField | 8.34 |
| phCalculated | | phCalculated | 6.35 |
| TempField | 85 | TempField | |
| TempLab | | TempLab | |
| OtherFieldAlkalinity | | OtherFieldAlkalinity | |
| OtherSpecificGravity | 0 | OtherSpecificGravity | |
| OtherTDS | 2696.16 | OtherTDS | 2117 |
| OtherCaCO3 | | OtherCaCO3 | |
| OtherConductivity | 4212.75 | OtherConductivity | |
| DissolvedCO2 | 86 | DissolvedCO2 | 320 |
| DissolvedO2 | | DissolvedO2 | |
| DissolvedH2S | 0 | DissolvedH2S | 1.5 |
| GasPressure | 100 | GasPressure | |
| GasCO2 | 0 | GasCO2 | |
| GasCO2PP | 0 | GasCO2PP | |
| GasH2S | 0 | GasH2S | |
| GasH2SPP | 0 | GasH2SPP | |
| PitzerCaCO3_70 | -0.34 | PitzerCaCO3_70 | |
| PitzerBaSO4_70 | 2.4 | PitzerBaSO4_70 | |
| PitzerCaSO4_70 | -2.41 | PitzerCaSO4_70 | |
| PitzerSrSO4_70 | -1.03 | PitzerSrSO4_70 | |
| PitzerFeCO3_70 | | PitzerFeCO3_70 | |
| PitzerCaCO3_220 | 0.45 | PitzerCaCO3_220 | |
| PitzerBaSO4_220 | 1.83 | PitzerBaSO4_220 | |
| PitzerCaSO4_220 | -2.31 | PitzerCaSO4_220 | |
| PitzerSrSO4_220 | -0.84 | PitzerSrSO4_220 | |
| PitzerFeCO3_220 | | PitzerFeCO3_220 | |

Gas 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 or gas composition.
- The samples below all show offset gas analysis varibality by formation is low.

| Well Name | API |
|---|---|
| Howell C 4 | 3004509435 |

| FRC Offset | | MV Offset | |
|---|---|---|---|
| AssetCode | 3004527080 | AssetCode | 3004560190 |
| AssetName | HOWELL E 301 | AssetName | HOWELL G 2 |
| CO2 | 0.01 | CO2 | 0.02 |
| N2 | 0 | N2 | 0 |
| C1 | 0.89 | C1 | 0.84 |
| C2 | 0.05 | C2 | 0.07 |
| C3 | 0.03 | C3 | 0.03 |
| ISOC4 | 0 | ISOC4 | 0.01 |
| NC4 | 0 | NC4 | 0.01 |
| ISOC5 | 0 | ISOC5 | 0 |
| NC5 | 0 | NC5 | 0 |
| NEOC5 | | NEOC5 | |
| C6 | 0.01 | C6 | |
| C6_PLUS | | C6_PLUS | 0.01 |
| C7 | | C7 | |
| C8 | | C8 | |
| C9 | | C9 | |
| C10 | | C10 | |
| AR | | AR | |
| CO | | CO | |
| H2 | | H2 | |
| O2 | | O2 | |
| H20 | | H20 | |
| H2S | 0 | H2S | 0 |
| HE | | HE | |
| C_O_S | | C_O_S | |
| CH3SH | | CH3SH | |
| C2H5SH | | C2H5SH | |
| CH2S3_2CH3S | | CH2S3_2CH3S | |
| CH2S | | CH2S | |
| C6HV | | C6HV | |
| CO2GPM | | CO2GPM | 0 |
| N2GPM | | N2GPM | 0 |
| C1GPM | | C1GPM | 0 |
| C2GPM | | C2GPM | 1.97 |
| C3GPM | | C3GPM | 0.84 |
| ISOC4GPM | | ISOC4GPM | 0.19 |
| NC4GPM | | NC4GPM | 0.28 |
| ISOC5GPM | | ISOC5GPM | 0.13 |
| NC5GPM | | NC5GPM | 0.1 |
| C6_PLUSGPM | | C6_PLUSGPM | 0.37 |

Hilcorp

June 26, 2023

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

Re: Application for Downhole Commingling
Well: HOWELL C #004
API: 3004509435
T30N - R08W - Section 18, Unit Letter: M
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) as follows:

18-30N-08W Units: C D(1) E(2) F K L(3) M(4) N
07-30N-08W Units: K L(3) M(4) N

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

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

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

# Sundry Print Report

06/21/2023

| | | |
|---|---|---|
| **Well Name:** HOWELL C | **Well Location:** T30N / R8W / SEC 18 / SWSW / 36.806305 / -107.718643 | **County or Parish/State:** SAN JUAN / NM |
| **Well Number:** 4 | **Type of Well:** CONVENTIONAL GAS WELL | **Allottee or Tribe Name:** |
| **Lease Number:** NMSF078596 | **Unit or CA Name:** | **Unit or CA Number:** NMNM73453 |
| **US Well Number:** 300450943500S1 | **Well Status:** Producing Gas Well | **Operator:** HILCORP ENERGY COMPANY |

## Notice of Intent

**Sundry ID:** 2736663

**Type of Submission:** Notice of Intent

**Type of Action:** Recompletion

**Date Sundry Submitted:** 06/20/2023

**Time Sundry Submitted:** 07:29

**Date proposed operation will begin:** 08/01/2023

**Procedure Description:** Hilcorp Energy Company requests permission to recomplete the subject well in the Fruitland Coal and downhole commingle with the existing Mesaverde. 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 5/22/2023 with Roger Herrera/BLM. The reclamation plan is attached.

## Surface Disturbance

**Is any additional surface disturbance proposed?:** No

## NOI Attachments

**Procedure Description**

Howell_C_4__API_3004509435__UPE_Recomplete_NOI_HEC061923_20230620072759.pdf

**Well Name:** HOWELL C

**Well Location:** T30N / R8W / SEC 18 / SWSW / 36.806305 / -107.718643

**County or Parish/State:** SAN JUAN / NM

**Well Number:** 4

**Type of Well:** CONVENTIONAL GAS WELL

**Allottee or Tribe Name:**

**Lease Number:** NMSF078596

**Unit or CA Name:**

**Unit or CA Number:** NMNM73453

**US Well Number:** 300450943500S1

**Well Status:** Producing Gas Well

**Operator:** HILCORP ENERGY COMPANY

## Operator

*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*

**Operator Electronic Signature:** AMANDA WALKER

**Signed on:** JUN 20, 2023 07:28 AM

**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 Name:**

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:**

## BLM Point of Contact

**BLM POC Name:** MATTHEW H KADE

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5055647736

**BLM POC Email Address:** MKADE@BLM.GOV

**Disposition:** Approved

**Disposition Date:** 06/20/2023

**Signature:** Matthew Kade

# HILCORP ENERGY COMPANY
## HOWELL C 4
## FRUITLAND COAL RECOMPLETION SUNDRY

| | |
|---|---|
| **Prepared by:** | Scott Anderson |
| **Preparation Date:** | June 19, 2023 |

| WELL INFORMATION | | | |
|---|---|---|---|
| **Well Name:** | HOWELL C 4 | **State:** | NM |
| **API #:** | 3004509435 | **County:** | SAN JUAN |
| **Area:** | 4 | **Location:** | 933' FSL & 931' FWL - Unit M - Section 18 - T 030N - R 008W |
| **Route:** | 0407 | **Latitude:** | 36.80631 N |
| **Spud Date:** | 9/28/1957 | **Longitude:** | -107.71864 W |

**PROJECT DESCRIPTION**

Isolate the Mesaverde, perforate and stimulate the UPE Fruitland Coal in 1-2 stages via frac string. Commingle the Fruitland Coal production with the existing Mesa Verde production. Strip facilities if necessary; repair production eqmt as needed

**CONTACTS**

| Title | Name | Office Phone # | Cell Phone # |
|---|---|---|---|
| Engineer | Scott Anderson | | 248-761-3965 |
| Area Foreman | Colter Faverino | | 326-9758 |
| Lead | Ramon Florez | | 599-3479 |
| Artificial Lift Tech | Jesse McDowell | | 386-8062 |
| Operator | Michael Archuleta | | 716-0118 |

# HILCORP ENERGY COMPANY
## HOWELL C 4
## FRUITLAND COAL RECOMPLETION SUNDRY

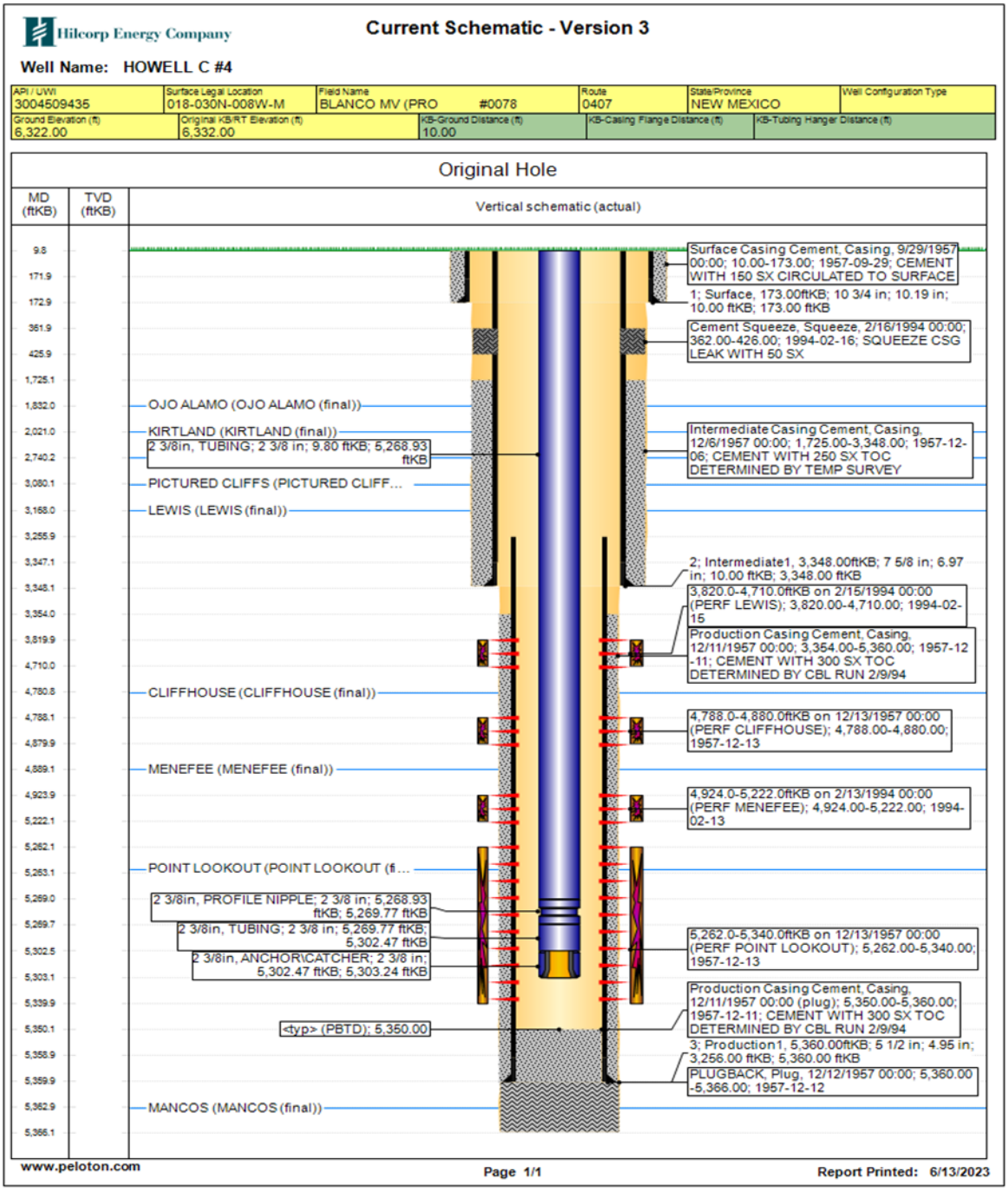
**JOB PROCEDURES**

☑ NMOCD **Contact OCD 24 hrs prior to MIRU. Record and document all casing pressures daily, including BH, IC (if present) and**
☑ BLM **PC. Comply with all NMOCD, BLM, and HEC safety and environmental regulations.**

1. MIRU service rig and associated equipment; NU and test BOP per HEC, State, and Federal guidelines.
2. TOOH with 2-3/8" tubing
3. **Set a 4-1/2" bridge plug at 3,770' to isolate the Mesa Verde formation.**
4. Load wellbore with fluid. RU wireline and run a CBL from the BP at 3,770' to surface
5. RU pressure test truck. Perform a Mechanical Integrity Test on the wellbore above the plug at 3,770'. Chart record the MIT test (Notify BLM and NMOCD +24hr before actual test).
6. **Set a 7" Base of Frac plug above the 4-1/2" liner top at +/- 3,130'**
7. **RU E-line crew. Perforate the Fruitland Coal. (Top perforation @ 2,590', Bottom perforation @ 3,080').**
   NOTE: perforation interval subject to change based on the results of the CBL run above
8. **RIH with frac string and packer, land packer ~50' above the top perf.**
9. N/D BOP, N/U 10K frac stack and test frac stack to frac pressure. PT frac string to 8000-9000 psi, PT backside to 1500 psi
10. **RU stimulation crew. Frac the Fruitland Coal in one or two stages.**
    NOTE: if a 2 stage operation is desired, an additional frac-thru plug will be set between the 2 sets of perforations
11. MIRU service rig. Nipple down frac stack, nipple up BOP and test. Kill well with fluid, if necessary
12. POOH w/ frac string and packer.
13. **Pending DHC approval, drill out the Base of Frac plug and Mesaverde Isolation plug. Clean out to PBTD**
14. TIH and land 2-3/8" production tubing.
15. **Flowback well thru flowback separator and sand trap. Get a commingled Fruitland Coal / Mesa Verde flow rate.**

# HILCORP ENERGY COMPANY
## HOWELL C 4
## FRUITLAND COAL RECOMPLETION SUNDRY

**HOWELL C 4 - CURRENT WELLBORE SCHEMATIC**



# HILCORP ENERGY COMPANY
## HOWELL C 4
## FRUITLAND COAL RECOMPLETION SUNDRY

**HOWELL C 4 - PROPOSED WELLBORE SCHEMATIC (PRIOR TO DRILLOUT/COMMINGLING)**

Hilcorp Energy Company

**WBD Proposed Formations 1**

**Well Name: HOWELL C #4**

| API / UWI | Surface Legal Location | Field Name | License No. | State/Province | Well Configuration Type |
|---|---|---|---|---|---|
| 3004509435 | 018-030N-008W-M | BLANCO MV (PRO #0078 | NM | NEW MEXICO | |
| **Ground Elevation (ft)** | **Casing Flange Elevation (ft)** | **KB-Ground Distance (ft)** | **KB-Casing Flange Distance (ft)** | **Original Spud Date** | **Rig Release Date** |
| 6,322.00 | | 10.00 | | 9/28/1957 00:00 | 2/22/1994 06:00 |

**Most Recent Job**

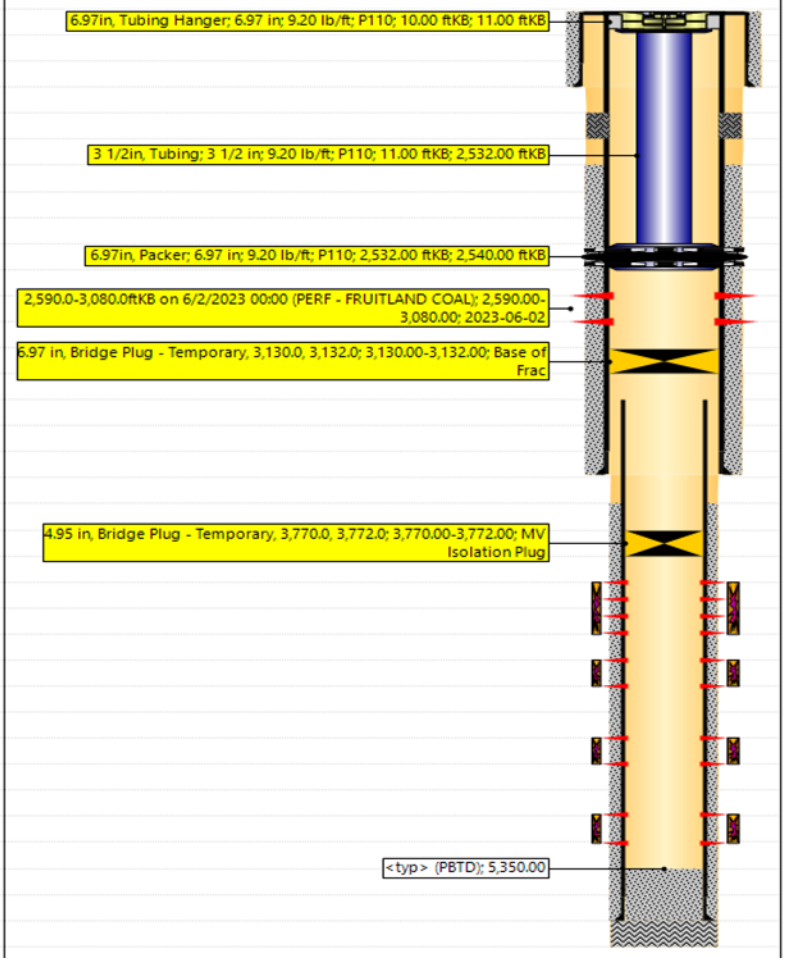
| Job Category | Primary Job Type | Secondary Job Type | Actual Start Date | End Date |
|---|---|---|---|---|
| WELL INTERVENTION | PAY ADD | | 2/7/1994 | 2/22/1994 |

**TD: 5,366.0**

Original Hole

| MD (ftKB) | TVD (ftKB) | Formation Tops | MD |
|---|---|---|---|
| 9.8 | | | |
| 11.2 | | | |
| 171.9 | | | |
| 172.9 | | | |
| 361.9 | | | |
| 425.9 | | | |
| 1,725.1 | | | |
| 1,850.1 | | OJO ALAMO | 1,850.0 |
| 2,022.0 | | KIRTLAND | 2,022.0 |
| 2,532.2 | | | |
| 2,540.0 | | | |
| 2,589.9 | | FRUITLAND | 2,590.0 |
| 3,080.1 | | PICTURED CLIFFS | 3,080.0 |
| 3,129.9 | | | |
| 3,131.9 | | | |
| 3,255.9 | | | |
| 3,282.2 | | LEWIS | 3,282.0 |
| 3,347.1 | | | |
| 3,348.1 | | | |
| 3,354.0 | | | |
| 3,770.0 | | | |
| 3,772.0 | | | |
| 3,819.9 | | | |
| 4,565.0 | | CLIFFHOUSE | 4,565.0 |
| 4,710.0 | | | |
| 4,788.1 | | | |
| 4,879.9 | | | |
| 4,889.1 | | MENEFEE | 4,889.0 |
| 4,923.9 | | | |
| 5,222.1 | | | |
| 5,257.9 | | POINT LOOKOUT | 5,258.0 |
| 5,262.1 | | | |
| 5,339.9 | | | |
| 5,350.1 | | | |
| 5,358.9 | | | |
| 5,359.9 | | | |
| 5,366.1 | | | |
| 5,444.9 | | MANCOS | 5,445.0 |

Vertical schematic (proposed)



**District I**
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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**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 340598

## WELL LOCATION AND ACREAGE DEDICATION PLAT

| 1. API Number | 2. Pool Code | 3. Pool Name |
|---|---|---|
| 30-045-09435 | 71629 | BASIN FRUITLAND COAL (GAS) |
| **4. Property Code** | **5. Property Name** | **6. Well No.** |
| 318563 | HOWELL C | 004 |
| **7. OGRID No.** | **8. Operator Name** | **9. Elevation** |
| 372171 | HILCORP ENERGY COMPANY | 6320 |

### 10. Surface Location

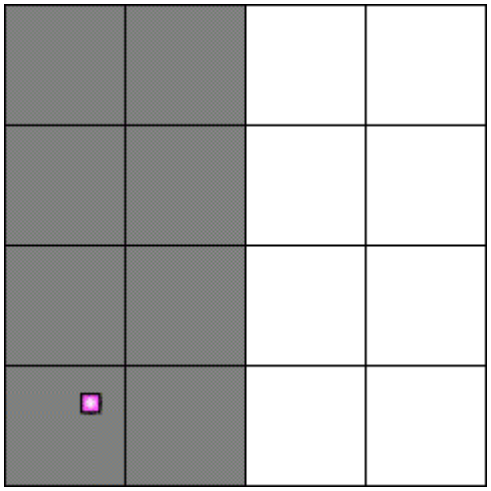
| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 18 | 30N | 08W | 4 | 933 | S | 931 | W | SAN JUAN |

### 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 | 13. Joint or Infill | 14. Consolidation Code | 15. Order No. |
|---|---|---|---|
| 334.94 | | | |

**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**



### OPERATOR CERTIFICATION

*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.*

E-Signed By:
Title: Operations Regulatory Tech Sr.
Date: 5/16/2023

### SURVEYOR CERTIFICATION

*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.*

Surveyed By: C. O. Walker
Date of Survey: 5/31/1957
Certificate Number: 1007

Hilcorp Energy
Interim Reclamation Plan
**Howell C 4**
API: 30-045-09435
Unit M – Sec 18 -T30N-R8W
Lat:36.80631, Long: -107.71864
Footage: 933' FSL & 931' FWL
San Juan County, NM

**1. PRE- INTERIM RECLAMATION SITE INSPECTION**

1.1) A pre-interim reclamation onsite inspection was conducted on May 22,2023 with BLM Environmental Protection Specialist Roger Herrera and Bobby Spearman Construction Foreman for Hilcorp Energy.
1.2) Location surface will be brush hogged or mulched and bladed as required within original disturbance to acquire additional working surface for well recompletion activities.

**2. LOCATION INTERIM RECLAMATION PROCEDURE**

2.1) Interim reclamation work will be completed after well recompletion.
2.2) Location tear drop will be re-defined as applicable during interim reclamation.
2.3) All disturbed areas will be seeded, any disturbed areas that are compacted will be ripped before seeding.
2.4) 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 PROCDURE**

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:** 6/20/2023

**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 |
|---|---|---|---|---|---|---|
| Howell C 4 | 3004509435 | M,18,30N,08W | 933' FSL & 931' FWL | 0 | 150 | 3 |
| | | | | | | |

**IV. Central Delivery Point Name:** Chaco Processing Plan [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 |
|---|---|---|---|---|---|---|
| **Howell C 4** | **3004509435** | | | | | |
| | | | | | | |

**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 2 – Enhanced Plan

**EFFECTIVE APRIL 1, 2022**

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

**IX. Anticipated Natural Gas Production:**

| Well | API | Anticipated Average Natural Gas Rate MCF/D | Anticipated Volume of Natural Gas for the First Year MCF |
|---|---|---|---|
| | | | |
| | | | |

**X. Natural Gas Gathering System (NGGS):**

| Operator | System | ULSTR of Tie-in | Anticipated Gathering Start Date | Available Maximum Daily Capacity of System Segment Tie-in |
|---|---|---|---|---|
| | | | | |
| | | | | |

**XI. Map.** ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII. Line Pressure.** Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:** ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

## 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: 6/20/2023 |
| Phone: 346.237.2177 |

| **OIL CONSERVATION DIVISION**<br>**(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 recomplete project. HEC will utilize flowback separation equipment and production separation equipment designed and built to industry specifications after the recomplete 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 recomplete 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 recompletion
   - 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.

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
__X__Yes ____No

# APPLICATION FOR DOWNHOLE COMMINGLING

Hilcorp Energy Company — Operator
382 Road 3100, Aztec, NM 87410 — Address

Howell C — Lease
4 — Well No.
M,18,30N,08W — Unit Letter-Section-Township-Range
San Juan — County

OGRID No. 372171 Property Code 318563 API No. 30-045-09435 Lease Type: __X__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) | 2740' - 3080' | | 3820' - 5340' |
| Method of Production (Flowing or Artificial Lift) | Artificial Lift | | 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) | 104 psi | | 123 psi |
| Oil Gravity or Gas BTU (Degree API or Gas BTU) | 1131 BTU | | 1256 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:<br>Rates: | Date:<br>Rates: | Date: 4/1/2023<br>Rates: Oil: 0 BBLS<br>Gas: 2646 mcf<br>Water: 29 BBLS |
| 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 % | Oil % Gas % | Oil % Gas % |

## ADDITIONAL DATA

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

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

Will commingling decrease the value of production? Yes____ No__x__

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__x__ No____

NMOCD Reference Case No. applicable to this well: _____

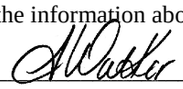
Attachments:
C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
Production curve for each zone for at least one year. (If not available, attach explanation.)
For zones with no production history, estimated production rates and supporting data.
Data to support allocation 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 Operation Regulatory Tech Sr. DATE 9/1/2023

TYPE OR PRINT NAME Amanda Walker TELEPHONE NO. (346) 237-2177

E-MAIL ADDRESS mwalker@hilcorp.com

**District I**
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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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 340598

## WELL LOCATION AND ACREAGE DEDICATION PLAT

| 1. API Number | 2. Pool Code | 3. Pool Name |
|---|---|---|
| 30-045-09435 | 71629 | BASIN FRUITLAND COAL (GAS) |
| **4. Property Code** | **5. Property Name** | **6. Well No.** |
| 318563 | HOWELL C | 004 |
| **7. OGRID No.** | **8. Operator Name** | **9. Elevation** |
| 372171 | HILCORP ENERGY COMPANY | 6320 |

### 10. Surface Location

| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 18 | 30N | 08W | 4 | 933 | S | 931 | W | SAN JUAN |

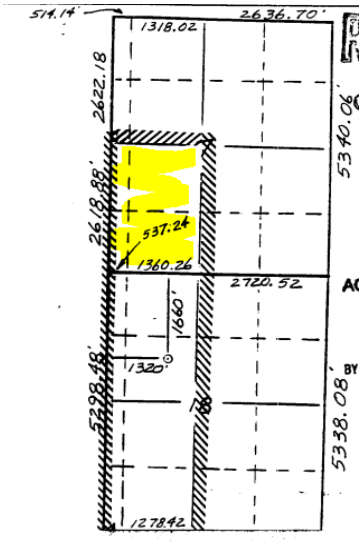
### 11. Bottom Hole Location If Different From Surface

| UL - Lot | Section | Township | Range | Lot Idn | Feet From | N/S Line | Feet From | E/W Line | County |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |



| 12. Dedicated Acres | 13. Joint or Infill | 14. Consolidation Code | 15. Order No. |
|---|---|---|---|
| 334.94 | | | NSP R-8857A |

**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**




### OPERATOR CERTIFICATION

*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.*

E-Signed By: A Walker
Title: Operations Regulatory Tech Sr.
Date: 5/16/2023

### SURVEYOR CERTIFICATION

*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.*

Surveyed By: C. O. Walker
Date of Survey: 5/31/1957
Certificate Number: 1007

**From:** McClure, Dean, EMNRD on behalf of Engineer, OCD, EMNRD
**To:** Mandi Walker; Cheryl Weston
**Cc:** McClure, Dean, EMNRD; Rikala, Ward, EMNRD; Wrinkle, Justin, EMNRD; Powell, Brandon, EMNRD; Paradis, Kyle O
**Subject:** Approved Administrative Order DHC-5323
**Date:** Monday, September 11, 2023 3:40:17 PM
**Attachments:** DHC5323 Order.pdf

NMOCD has issued Administrative Order DHC-5323 which authorizes Hilcorp Energy Company (372171) to downhole commingle production within the following well:

**Well Name:** **Howell C #4**
**Well API:** **30-045-09435**

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

**From:** Mandi Walker
**To:** McClure, Dean, EMNRD; Cheryl Weston
**Subject:** RE: [EXTERNAL] Action ID: 232578; DHC-5323
**Date:** Friday, September 1, 2023 6:49:56 AM
**Attachments:** Howell C 4 C107A Updates.pdf

Good morning Dean,

I have attached the updated C-107A coversheet, and also attached the comments from Lea. Let me know if you need anything further for your review. And I did see that the NOI was approved, I was out on Friday and missed it.

Dean,

Shut in pressures were calculated for operated offset standalone wells in each of the zones being commingled in the well in question via the following process:

1. Wells were shut in for 24 hours
2. Echometer was used to obtain a fluid level
3. Shut in BHP was calculated for the proposed commingled completion

**List of wells used to calculate BHPs for the Project:**

| | | |
|---|---|---|
| 3004533551 | Quigley 100 | FRC |
| 3004521727 | Pierce A 1A | MV |
| 3004533808 | Atlantic D Com E 6E | DK |

I believe each of the reservoirs to be continuous and in a similar state of depletion at this well and at each of the wells from which the pressures are being derived.

**Lea Peters**
Hilcorp Alaska
Reservoir Engineer, Prudhoe Bay East (FS2)
*Office: (907) 564-4696*
*Cell: (770) 630-9243*

Thank you!

*Mandi Walker*
*SJN/SJS (6,7) Regulatory Technician Sr.*
*Office: 346.237.2177*
*mwalker@hilcorp.com*

**From:** McClure, Dean, EMNRD <Dean.McClure@emnrd.nm.gov>

**Sent:** Thursday, August 31, 2023 6:22 PM
**To:** Mandi Walker <mwalker@hilcorp.com>; Cheryl Weston <cweston@hilcorp.com>
**Subject:** [EXTERNAL] Action ID: 232578; DHC-5323

**CAUTION:** External sender. DO NOT open links or attachments from UNKNOWN senders.

To whom it may concern (c/o Amanda Walker for Hilcorp Energy Company),

The Division is reviewing the following application:

| | |
|---|---|
| **Action ID** | 232578 |
| **Admin No.** | DHC-5323 |
| **Applicant** | Hilcorp Energy Company (372171) |
| **Title** | Howell C #4 |
| **Sub. Date** | 6/26/2023 |

Please provide the following additional supplemental documents:

- Please provide an amended form C-107A with the following changes:
  - Amended perf range for the FLC that matches the approved C-103E
  - Pool Code for the MV

Please provide additional information regarding the following:

- Please provide additional information regarding from where the BHP was derived.

Additional notes:

-

All additional supplemental documents and information may be provided via email and should be done by replying to this email. The produced email chain will be uploaded to the file for this application.

Please note that failure to take steps to address each of the requests made in this email within 10 business days of receipt of this email may result in the Division rejecting the application requiring the submittal of a new application by the applicant once it is prepared to address each of the topics raised.

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

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**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-5323**

## 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. 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

8. 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.
9. 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.
10. 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.

11. Applicant's proposed method of allocation, as modified herein, complies with 19.15.12.11(A)(8) NMAC.

12. 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. fourteen percent (14%) shall be allocated to the BASIN FRUITLAND COAL (GAS) pool (pool ID: 71629); and
    b. eighty-six percent (86%) 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**

**DATE:** 9/11/2023

**DYLAN M. FUGE**
**DIRECTOR**

State of New Mexico
Energy, Minerals and Natural Resources Department

# Exhibit A

| | | | | | |
|---|---|---|---|---|---|
| | Order: | DHC-5323 | | | |
| | Operator: | Hilcorp Energy Company (372171) | | | |
| | Well Name: | Howell C #4 | | | |
| | Well API: | 30-045-09435 | | | |
| Upper Zone | Pool Name: | BASIN FRUITLAND COAL (GAS) | | | |
| | Pool ID: | 71629 | Current: | New: | X |
| | Allocation: | | Oil: 14% | Gas: | |
| | Interval: | Perforations | Top: 2,740 | Bottom: | 3,080 |
| 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: 86% | Gas: | |
| | Interval: | Perforations | Top: 3,820 | Bottom: | 5,340 |
| | 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

CONDITIONS

Action 232578

## CONDITIONS

| | |
|---|---|
| Operator:<br>HILCORP ENERGY COMPANY<br>1111 Travis Street<br>Houston, TX 77002 | OGRID:<br>372171 |
| | Action Number:<br>232578 |
| | Action Type:<br>[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. | 9/11/2023 |