RECEIVED:	REVIEWER:	TYPE:	APP NO:	
	- Geolog	ABOVE THIS TABLE FOR OCD DI CO OIL CONSERVA ical & Engineering rancis Drive, Santa	TION DIVISION Bureau –	·
THIS CH	HECKLIST IS MANDATORY FOR A	RATIVE APPLICATION ALL ADMINISTRATIVE APPLICA REQUIRE PROCESSING AT THE	IONS FOR EXCEPTIONS TO DIVISION RULES AN	D
Well Name:				
<ol> <li>TYPE OF APPLIC A. Location - N</li> <li>N</li> <li>B. Check on [1] Comn</li> <li>[1] Comn</li> <li>[1] Inject</li> <li>[1] Comn</li> <li>[1] Co</li></ol>	CATION: Check those - Spacing Unit – Simu SL NSP e only for [1] or [11] ningling – Storage – M DHC CTB F ion – Disposal – Press WFX PMX S REQUIRED TO: Check operators or lease ho y, overriding royalty of ation requires publish ation and/or concurr ation and/or concurr of the above, proof of ice required	INDICATED BELO	P(PRORATION UNIT) SD S OLM nced Oil Recovery DR PPR FOR C Notice ners Applica Comple	DCD ONLY Complete ation it ete
notifications ar	e submitted to the Di	vision.	ion until the required information anagerial and/or supervisory capacity.	on and

Print or Type Name

Date

Phone Number

Cherylene Weston

Signature

e-mail Address

#### Received by OCD: 1/26/2024 2:49:51 PM

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 Form C-107A Revised August 1, 2011

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Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505 APPLICATION TYPE \_\_Single Well \_\_Establish Pre-Approved Pools EXISTING WELLBORE \_X\_Yes \_\_\_No

### APPLICATION FOR DOWNHOLE COMMINGLING

Hilcorp Energy Comp	bany	382 Road 3100, Azte	ec, NM 87410		
Operator		Address			
Beaver Lodge Com	1M	I, 32, T30N, R08W		San Juan County,	NM
Lease	Well No.	Unit Letter-Section-Townshi	ip-Range	County	
OGRID No. 372171	_ Property Code <u>319133</u>	_ API No. <u>30-045-35552</u>	Lease Type:	Federal <u>X</u> State	Fee

DATA ELEMENT UPPER ZONE **INTERMEDIATE ZONE** LOWER ZONE **Basin Fruitland Coal** Blanco Mesaverde Basin Dakota Pool Name 71629 72319 71599 Pool Code 4110′ – 5546′ 2785' - 3116' 7420' - 7634' Top and Bottom of Pay Section (Perforated or Open-Hole Interval) Artificial Lift Artificial Lift Artificial Lift Method of Production (Flowing or Artificial Lift) Bottomhole Pressure (Note: Pressure data will not be required if the bottom 178 psi 639 psi 126 psi perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone) Oil Gravity or Gas BTU (Degree API or Gas BTU) 1121 BTU 1284 BTU 1057 BTU Producing, Shut-In or New Zone Producing Producing New Zone Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, Date: 9/1/2023 Date: 9/1/2023 Date: Oil: 0 bbls Oil: 0 bbls applicant shall be required to attach production Rates: Gas: 2,394 Mcf Rates: Gas: 2,123 Mcf estimates and supporting data.) Rates: Water: 18 bbls Water: 22 bbls Fixed Allocation Percentage Oil Gas Oil Gas Oil Gas than current or past production, supporting data or % % % % % % explanation will be required.)

## 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 Yes		No No
Are all produced fluids from all commingled zones compatible with each other?	Yes	Х	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	Х	No
NMOCD Reference Case No. applicable to this well.			

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 Cherylene Weston		
TYPE OR PRINT NAME Chervlene Weston	TELEPHONE NO. (713) 289-2615	

E-MAIL ADDRESS \_\_\_\_\_ cweston@hilcorp.com

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#### 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

Page 3 of 53 Form C-102 August 1, 2011

Permit 355134

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number	2. Pool Code	3. Pool Name			
30-045-35552	71629	BASIN FRUITLAND COAL (GAS)			
4. Property Code	5. Property Name	6. Well No.			
319133	BEAVER LODGE COM	001M			
7. OGRID No.	8. Operator Name	9. Elevation			
372171	HILCORP ENERGY COMPANY	6217			

## 10. Surface Location

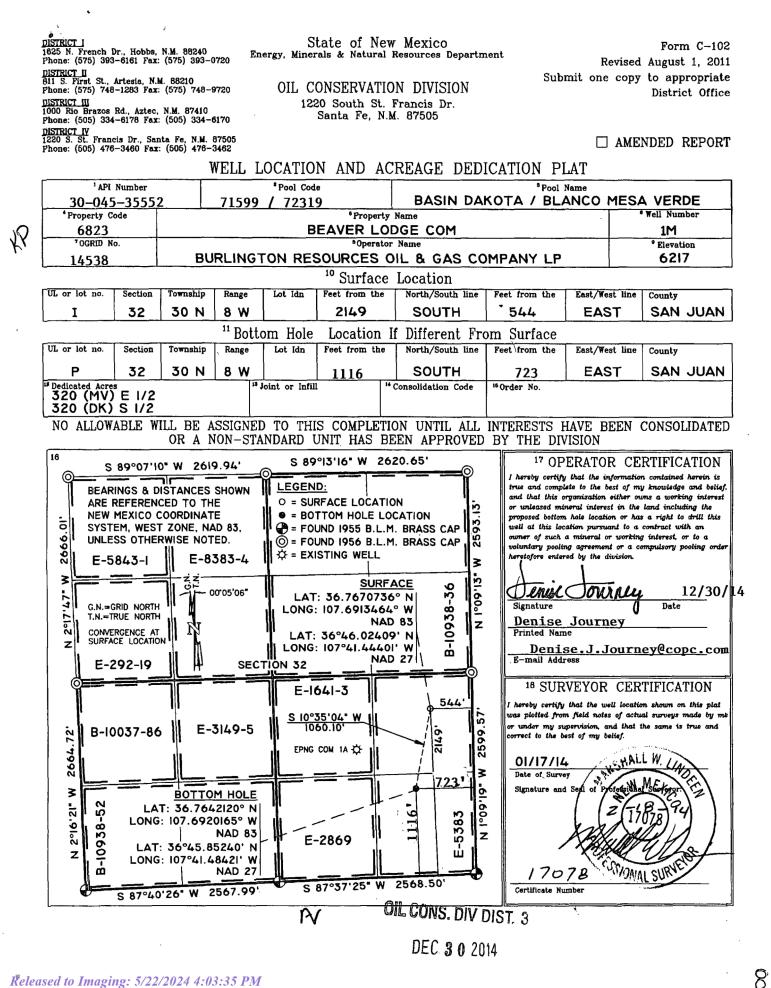
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County	
1	32	30N	08W		2149	S	544	E	SAN JU	AN 📋

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

UL - Lot	P Section	32	Township 30N	Range 08W	Lot Idn	Feet From 1116	N/S Line	Feet From 723	E/W Line E	County SAN JUAN
12. Dedicat	ed Acres 320.00			13. Joint or Infill		14. Consolidatio	n 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

<b>OPERATOR CERTIFICATION</b> 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: Cherylene Weston Title: Cherylene Weston Date: 12/04/2023
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:Marshall W. LindeenDate of Survey:1/17/2014
Certificate Number: 17078



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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 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.

# **Beaver Lodge Com 1M Allocation**

The forecasts for Fruitland Coal production have been generated using type curves of production in the surrounding trend.

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

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

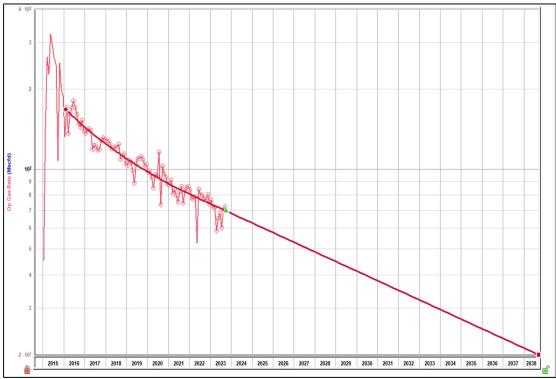
# **Production Allocation Method – Subtraction**

# **Gas Allocation:**

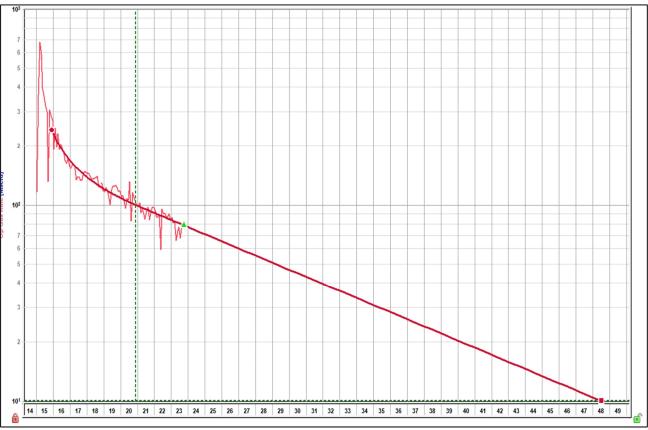
Production for the downhole commingle will be allocated using the subtraction method in agreement with local agencies. The base formations are the Mesaverde/Dakota and the added formation to be trimmingled is the Fruitland Coal. The subtraction method applies an average monthly production forecast to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

Hilcorp intends to continue to allocate the projected base production on the same fixed percentages to the following pools 47% (MV) 53% (DK) while the subtraction method is being used to determine the allocation to the new zone.

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



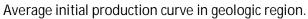
## Current Zone 1 Forecast – Mesaverde



#### Current Zone 2 Forecast – Dakota

**Proposed Zone Forecast – Fruitland Coal** 



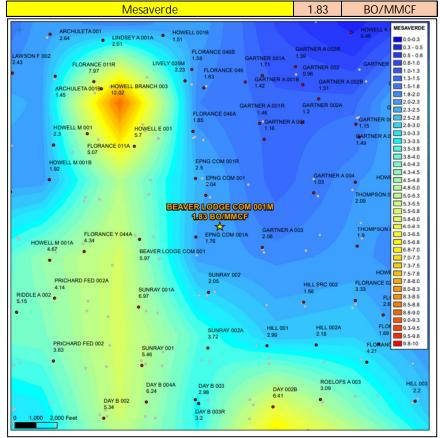


# Oil Allocation:

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

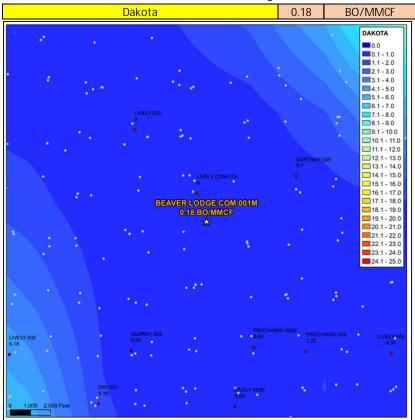
Formation	Yield (bbl/MM)	Remaining Reserves (MMcf)	% Oil Allocation
MV	1.83	217	43%
FRC	0.61	777	51%
DK 0.18		302	6%
			100%

Current Zone 1 – Mesaverde Oil Yield Map



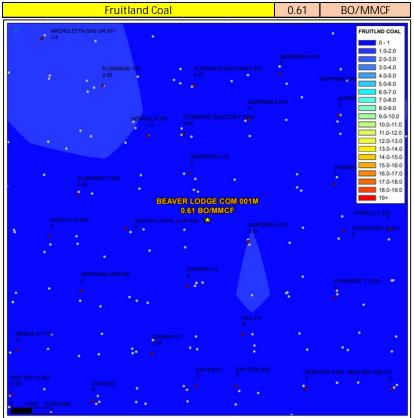
9-Section Area Map of Standalone Oil Yields. Sampled well to this map.

## Current Zone 2 – Dakota Oil Yield Map



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

## Proposed Zone – Fruitland Coal Oil Yield Map



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

## **Supplemental Information:**

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:

3004527835	ROELOFS A 4	FRC
3004526343	EPNG COM 1A	MV
3004526314	SUNRAY 8	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.

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 water with low TDS.

Well Name	API
BEAVER LODGE COM 1M	3004535552

API         300452704         API         2004526313         API         2004526314           CationBarium         0         CationBarium         0.1         CationBarium         0.1           CationBarium         0.1         CationBarium         0.1         CationBarium         0.1           CationCatclum         4.0         CationCatclum         165         CationCatclum         93           CationToin         7.3         CationMagnesium         0.49         CationMagnesium         0.49           CationMagnese         0.09         CationMagnese         0.7         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationStrontium         0.02           CationStrontium         0.09         CationStrontium         0.12         CationStrontium         0.2           CationStrontium         0.02         CationStrontium         0.2         CationStrontium         0.2           CationStrontium         CationAuminum         CationAuminum         CationAuminum         CationAuminum         CationCationCation         CationAuminum         CationCationCation         CationAuminum         CationCationCation         CationCationCation         CationCation	FRC Offset		MV Offs	et	DK Offset		
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CationZinc         CationZinc         CationAluminum           CationAluminum         CationAluminum         CationAluminum           CationCopper         CationCopper         CationCopper           CationLinkad         CationLinkum         CationLinkum           CationLinkum         CationLinkum         CationCobalt           CationCobalt         CationCobalt         CationCobalt           CationCobalt         CationCobalt         CationCobalt           CationCobalt         CationCobalt         CationCobalt           CationCobalt         CationCobalt         CationCobalt           CationCobalt         CationMolybdenum         CationMolybdenum           CationAlonDybdenum         CationMolybdenum         CationMolybdenum           CationAlonChiride         50 AnionChiride         84           AnionChiride         50 AnionBicarbonate         00           AnionBicarbonate         7108 AnioBicarbonate         50 AnionBicarbonate         280           AnionPhorphate         AnionPhorphate         AnionPhorphate         AnionPhorphate           AnionPhorphate         AnionPhorphate         AnionPhorphate         AnionPhorphate           AnionSulfate         0 AnionSulfate         515 AnionSulfate         108           phFiel	CationSodium	82.29	CationSodium	-66.59	CationSodium	12.14	
CationAluminum         CationAluminum         CationCopper           CationCopper         CationCopper         CationCopper           CationLead         CationLead         CationLead           CationLithium         CationLithium         CationLithium           CationAlickel         CationCobalt         CationCobalt           CationChomium         CationChonium         CationCobalt           CationAlickel         CationChomium         CationChomium           CationAlionCarbonate         OAnionCarbonate         OAnionCarbonate           AnionChoronium         CationMolybdenum         CationMolybdenum           CationAliorAdomate         OAnionCarbonate         OAnionCarbonate           AnionCarbonate         OAnionCarbonate         OAnionCarbonate           AnionBromide         AnionBromide         AnionBromide           AnionFluoride         AnionFluoride         AnionFluoride           AnionPhosphate         AnionPhosphate         AnionPhosphate           AnionPhosphate         AnionPhosphate         AnionPhosphate           AnionPhosphate         AnionPhosphate         AnionSuifate           OtherSpecificGravity         OtherSpecificGravity         OtherSpecificGravity           OtherSpecificGravity         OtherGobalt         CherroDal	CationSilica		CationSilica		CationSilica		
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OtherFieldAlkalinityOtherFieldAlkalinityOtherFieldAlkalinityOtherSpecificGravity1OtherSpecificGravity0OtherSpecificGravity0OtherTDS315.26OtherTDS810.31OtherTDS876.34OtherCaC0312.06OtherCaC03OtherCaC030OtherConductivity0DissolvedC02280DissolvedC02110DissolvedC020DissolvedC020DissolvedC02110DissolvedC20DissolvedC2000.52GasPressure0DissolvedH2S0.520.52GasPressure0GasC020GasC020GasC020GasC020GasC020GasH2S0GasH2S0GasH2S00GasH2SPP0GasH2SPP0GasH2SPP00PitzerCaC03_70PitzerGaC03_70-2.54PitzerGaC03_70-0.81PitzerSA4_700PitzerGaC03_70-2.54PitzerGaC03_70-2.54PitzerGaC03_70PitzerGaC03_70-2.54PitzerGaC03_70-2.54PitzerGaC03_70PitzerGaC03_70-2.54PitzerGaC03_70-2.54PitzerFeC03_70PitzerFaC03_70PitzerFaC03_70-2.54PitzerFaC03_200PitzerFaC03_200PitzerFaC03_20-0.01PitzerFaC03_200PitzerFaC03_20PitzerGaC03_20-2.54PitzerGaC04_200PitzerGaC03_20PitzerGaC03_20-2.54PitzerGaC03_200PitzerFaC03_70-2							
OtherSpecificGravity1OtherSpecificGravity0OtherSpecificGravity0OtherTDS315.26OtherTDS810.31OtherTDS876.34OtherCaC0312.06OtherCaC03OtherCaC030OtherConductivityOtherConductivity1266.11OtherConductivity1369.28DissolvedC020DissolvedC02280DissolvedC02110DissolvedC020DissolvedC02000DissolvedO20DissolvedC02000DissolvedH2S00.15DissolvedH2S0.520GasPressureGasPressure100GasPressure100GasC02GasC020GasC0200GasH2SGasH2S0GasH2S00GasH2SPPGasH2SPP0GasH2SPP00PitzerCaC03_70PitzerCaC03_70-2.54PitzerCaC03_70-0.81PitzerSS04_70PitzerSS04_70-1.15PitzerCaC03_70-2.54PitzerGaC03_220PitzerGaC3_70-2.68PitzerSC3_70-2.54PitzerGaC03_220PitzerGaC03_220PitzerGaC03_220-0.01PitzerGaC03_220PitzerGaC03_220PitzerGaC03_220-0.02PitzerGaC03_220PitzerGaC03_220PitzerGaC03_220-0.22PitzerGaC04_220PitzerGaC04_220PitzerGaC04_220-1.43PitzerSrS04_220PitzerSrS04_220PitzerSrS04_220-2.34							
OtherTDS         315.26         OtherTDS         810.31         OtherTDS         876.34           OtherCaCO3         12.06         OtherCaCO3         OtherCaCO3<		1		0		0	
OtherCaCO312.06OtherCaCO3OtherCaCO3OtherConductivityOtherConductivity1266.11OtherConductivity1369.28DissolvedCO20DissolvedCO2280DissolvedCO2110DissolvedO2DissolvedO2DissolvedO2000DissolvedH2S0DissolvedH2S0.15DissolvedH2S0.52GasPressureGasPressure100GasCO200GasCO2GasCO20GasCO200GasCO2GasCO20GasCO200GasH2SGasH2S0GasH2S00GasH2SPPGasH2SPP0GasH2SPP00PitzerCaCO3_70PitzerCaCO3_70-2.54PitzerCaSO4_70-0.81PitzerSo4_70PitzerFeCO3_70-1.15PitzerCaSO4_70-1.54PitzerFcCO3_70PitzerFeCO3_70-2.68PitzerCaSO4_70-2.54PitzerGaCO3_220PitzerFcCO3_70PitzerFeCO3_70-2.54PitzerGaCO3_220PitzerGaCO3_220PitzerGaSO4_220-0.01PitzerBaSO4_220PitzerGaSO4_220PitzerGaSO4_220-0.22PitzerCaSO4_220PitzerGaSO4_220PitzerGaSO4_220-0.23PitzerSrSO4_220PitzerSrSO4_220PitzerSrSO4_220-2.34							
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DissolvedCO20DissolvedCO2280DissolvedCO2110DissolvedO2DissolvedO2DissolvedO2DissolvedO20DissolvedH2S0DissolvedH2S0.15DissolvedH2S0.52GasPressureGasPressure100GasCO200GasCO2GasCO20GasCO200GasCO2PPGasCO2PP0GasCO2PP00GasH2SGasH2S0GasH2S00PitzerCaCO3_70PitzerCaCO3_70-2.54PitzerCaCO3_70-0.81PitzerSO4_70PitzerGaSO4_700-1.15PitzerCaSO4_70-1.54PitzerSO4_70PitzerFeCO3_70-2.68PitzerCaCO3_70-2.54PitzerCaCO3_220PitzerGaCO3_220PitzerCaCO3_220-0.01PitzerBaSO4_220PitzerGaSO4_220PitzerGaSO4_220-0.22PitzerCaSO4_220PitzerGaSO4_220PitzerGaSO4_220-0.22PitzerSrSO4_220PitzerSrSO4_220PitzerSrSO4_220-2.34PitzerSrSO4_220PitzerSrSO4_220PitzerSrSO4_220-2.34				1266.11		1369.28	
DissolvedO2DissolvedO2DissolvedO2DissolvedH2S0DissolvedH2S0.15DissolvedH2S0DissolvedH2S0.52GasPressureGasPressure100GasPressure100GasCO2GasCO20GasCO20GasCO2PPGasCO2PP0GasCO2PP0GasH2SGasH2S0GasH2S0GasH2SPPGasH2SPP0GasH2SPP0PitzerCaCO3_70PitzerCaCO3_70-2.54PitzerCaCO3_70-0.81PitzerSo4_70PitzerGaSO4_700-1.15PitzerCaSO4_70-1.54PitzerSo4_70PitzerFaCO3_70PitzerFaCO3_70-2.54PitzerCaCO3_70-2.54PitzerGaCO3_220PitzerFaCO3_70PitzerFeCO3_70-2.54PitzerCaCO3_20-0.01PitzerBaSO4_220PitzerGaCO3_220PitzerGaSO4_220-0.22-0.22PitzerGaSO4_220PitzerGaSO4_220PitzerGaSO4_220-0.22PitzerSrSO4_220PitzerSrSO4_220PitzerSrSO4_220-2.34PitzerSrSO4_220PitzerSrSO4_220PitzerSrSO4_220-2.34	, ,	0	,				
GasPressure         GasPressure         100         GasPressure         100         GasPressure         100         GasCO2         0         GasH2S         0			DissolvedO2				
GasPressure         GasPressure         100         GasPressure         100         GasPressure         100         GasCO2         0         GasH2S         0	DissolvedH2S	0	DissolvedH2S	0.15	DissolvedH2S	0.52	
GasCO2         GasCO2         0         GasCO2         0           GasCO2PP         GasCO2PP         0         GasH2S         0         GasH2S         0         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0         PitzerCaCO3_70         -0.81         PitzerCaCO3_70         -1.54         PitzerCaCO3_70         -1.54         PitzerFaCO3_70         -1.54         PitzerFaCO3_70         PitzerFaCO3_70         PitzerFaCO3_70         PitzerFaCO3_70         PitzerFaCO3_220         -0.01         PitzerFaCO3_220         -0.01         PitzerFaCO3_220         -0.01         PitzerFaSO4_220         -0.22         PitzerCaSO4_220         -0.22         PitzerCaSO4_220	GasPressure						
GasCO2PP         GasCO2PP         0         GasCO2PP         0           GasH2S         GasH2S         0         GasH2S         0           GasH2SPP         GasH2SPP         0         GasH2SPP         0           PitzerCaCO3_70         PitzerCaCO3_70         -2.54         PitzerCaCO3_70         -0.81           PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerSiSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSiSO4_70         PitzerSiSO4_70         -2.68         PitzerSiSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerSiSO4_70         -2.54         PitzerSiSO4_70         -2.54           PitzerFeCO3_70         PitzerSiSO4_70         -2.68         PitzerSiSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerSiSO4_70         -2.54           PitzerFeCO3_70         PitzerGaCO3_220         PitzerGaCO3_220         -0.01           PitzerSaSO4_220         PitzerGaSO4_220         PitzerGaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerSiSO4_220         -1.43           PitzerSiSO4_220         PitzerSiSO4_220         Pi							
GasH2S         GasH2S         0         GasH2S         0           GasH2SPP         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0           PitzerCaC03_70         PitzerCaC03_70         -2.54         PitzerCaC03_70         -0.81           PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrSO4_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerFeC03_70         PitzerFeC03_70         PitzerSrSO4_70         -2.54           PitzerSaSO4_220         PitzerCaC03_220         PitzerSrSO4_70         -2.54           PitzerSaSO4_220         PitzerCaC03_220         PitzerSaSO4_70         -2.54           PitzerSaSO4_220         PitzerCaC03_220         PitzerSaSO4_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.23           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34	GasCO2PP		GasCO2PP				
GasH2SPP         GasH2SPP         O         GasH2SPP         O           PitzerCaCO3_70         PitzerCaCO3_70         -2.54         PitzerCaCO3_70         -0.81           PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrSO4_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerSrSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70           PitzerCaCO3_220         PitzerCaCO3_220         PitzerCaCO3_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         -0.22         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.22         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.23         -0.22           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34		İ					
PitzerCaCO3_70         PitzerCaCO3_70         -2.54         PitzerCaCO3_70         -0.81           PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrSO4_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70         -2.54           PitzerSaSO4_220         PitzerCaCO3_220         PitzerSaSO4_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.22           PitzerSrSO4_220         PitzerCaSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         -2.34							
PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrSO4_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70         PitzerSrSO4_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22         PitzerCaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43         PitzerSrSO4_220         -2.34	PitzerCaCO3_70					-	
PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrSO4_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70         PitzerSrSO4_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22         PitzerCaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43         PitzerSrSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34         PitzerSrSO4_220         -2.34	PitzerBaSO4_70						
PitzerSrS04_70         PitzerSrS04_70         -2.68         PitzerSrS04_70         -2.54           PitzerFeC03_70         Pitzer	PitzerCaSO4_70		-				
PitzerFeC03_70         PitzerFeC03_70         PitzerFeC03_70           PitzerCaC03_220         PitzerCaC03_220         PitzerCaC03_220         -0.01           PitzerBaS04_220         PitzerBaS04_220         PitzerBaS04_220         -0.22           PitzerCaS04_220         PitzerCaS04_220         PitzerCaS04_220         -1.43           PitzerSrS04_220         PitzerSrS04_220         PitzerSrS04_220         -2.34	PitzerSrSO4_70				_		
PitzerCaCO3_220         PitzerCaCO3_220         PitzerCaCO3_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.22           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34	PitzerFeCO3_70						
PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34		İ	—	l	_	-0.01	
PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34	PitzerBaSO4 220	İ	-	l	-		
PitzerSrSO4_220 PitzerSrSO4_220 -2.34			-				
		İ	_	l	_		
	PitzerFeCO3 220		PitzerFeCO3 220	1	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
BEAVER LODGE COM 1M	3004535552

FRC	Offset	MV	Offset	DK Offset			
AssetCode	3004527429	AssetCode	3004526343	AssetCode	3004526314		
AssetName	THOMPSON LS 3	AssetName	EPNG COM 1A	AssetName	SUNRAY 8		
CO2	0.02	CO2	0.02	CO2	0.02		
N2	0	N2	0	N2	0		
C1	0.88	C1	0.8	C1	0.92		
C2	0.06	C2	0.09	C2	0.05		
С3	0.03	C3	0.05	C3	0.01		
ISOC4	0	ISOC4	0.01	ISOC4	0		
NC4	0	NC4	0.01	NC4	0		
ISOC5	0	ISOC5	0.01	ISOC5	0		
NC5	0	NC5	0	NC5	0		
NEOC5		NEOC5		NEOC5			
С6	0	C6		С6			
C6_PLUS		C6_PLUS	0.01	C6_PLUS	0		
С7	0	C7		C7			
C8	0	C8		C8			
С9	0	С9		С9			
C10		C10		C10			
AR		AR		AR			
СО		CO		CO			
H2		H2		H2			
02		02		02			
H20		H20		H20			
H2S	0	H2S		H2S			
HE		HE		HE			
C_O_S		C_O_S		C_O_S			
CH3SH		CH3SH		CH3SH			
C2H5SH		C2H5SH		C2H5SH			
CH2S3_2CH3S		CH2S3_2CH3S		CH2S3_2CH3S			
CH2S		CH2S		CH2S			
C6HV		C6HV		C6HV			
CO2GPM		CO2GPM	0	CO2GPM	0		
N2GPM		N2GPM		N2GPM	0		
C1GPM		C1GPM		C1GPM	0		
C2GPM		C2GPM	2.47	C2GPM	1.21		
C3GPM		C3GPM	1.31	C3GPM	0.26		
ISOC4GPM		ISOC4GPM	0.3	ISOC4GPM	0.11		
NC4GPM		NC4GPM		NC4GPM	0.06		
ISOC5GPM		ISOC5GPM	0.21	ISOC5GPM	0.06		
NC5GPM		NC5GPM	0.16	NC5GPM	0.03		
C6_PLUSGPM		C6_PLUSGPM	0.57	C6_PLUSGPM	0.14		

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 water with low TDS.

Well Name	API
BEAVER LODGE COM 1M	3004535552

API         300452704         API         3004526343         API         3004526314           CationBarlum         DAY COM 200         Property         EVRG COM 1A Property         SUMRAY E           CationBarlum         O. CationBarlum         O. CationBarlum         O. CationBarlum         O. 1           CationEdicium         4.0 CationBarlum         1.8 CationFacilum         93           CationAngenesium         0.4 Q CationMagnesium         82         CationMangenesium         249           CationMangenesium         0.4 Q CationMagnesium         82         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationStrontium         0.0 ZationStrontium         0.0 ZationStrontium         0.2 ZationStrontium         0.2 ZationStrontium         0.2 ZationStrontium         0.2 ZationStrontium         0.2 ZationStrontium         CationCapper         CationCationCapper         CationCationCapper         CationCationCapper         CationCationCapper         CationCationCapper         CationCationCation         CationStrontium         CationStrontium         CationStrontium         CationStrontium         CationStrontium         CationStrontium         CationStrontium         CationStrontium         CationStron	FRC Offset		MV Offs	set	DK Offset			
CationBarium         0.1 CationBarium         0.1 CationBarium         0.1           CationCalcium         4.02 CationCalcium         165 CationCalcium         93           CationCalcium         0.40 CationCalcium         135 CationTron         249           CationMagnaese         0.09 CationMagnaese         0.7 CationMagnaese         0.9 CationMagnaese         0.9 CationMagnaese         0.9 CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         0.2 CationStrontium         0.0 2 CationStrontium         0.0 2 CationStrontium         0.0 2 CationStrontium         0.0 2 CationStrontium         0.0 2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         0.2 CationStrontium         CationCationZine         CationCatine         CationCationZine         CationCati	API							
CationBartum         0.1 CationBartum         0.1 CationBartum         0.1 CationBartum           CationCalcium         4.02 CationCalcium         165 CationCalcium         93           CationTon         7.22 CationCalcium         135 CationInton         93           CationMagnesium         0.49 CationMagnesium         83 CationMagnesium         49           CationMagnese         0.7 CationMangnese         0.7 CationMangnese         0.9           CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus         CationStrontium         0.0         CationStrontium         0.12         CationStrontium         0.2         CationStrontium         0.2         CationStrontium         0.2         CationStrontium         0.2         CationStrontium         0.2         CationCationStrontium         CationCationStrontium         CationCationStrontium         CationCationStrontium         CationCationStrontium         CationCationStrontium         CationCationStrontium         CationCationStrontium         CationCationStront	Property	DAY COM 200	Property	EPNG COM 1A	Property	SUNRAY 8		
CationBoron         CationBoron         CationBoron           CationAcidum         4.02 CationCalcium         165         CationInco         240           CationAngenesium         0.40         CationMagnesium         8.3         CationMagnesium         4.40           CationMagnesium         0.40         CationMagnesium         8.3         CationMagnesium         4.40           CationPhosphorus         C						0.1		
Cationizion         7.23         Cationizani         135         Cationizani         249           Cationizanizani         0.49         Cationizani         83         Cationizani         49           Cationizanizani         0.40         Cationizanizani         63         Cationizanizani         49           Cationizanizani         Cationizanizanizani         Cationizanizanizani         49         40           Cationizanizani         Cationizanizanizani         Cationizanizani         40         40           Cationizani         Cationizanizani         40         40         40         40           Cationizani         Cationizanizani         40	CationBoron		CationBoron					
Cation/con         7.23         Cation/Angresium         135         Cation/Angresium         249           Cation/Angresium         0.49         Cation/Angresium         83         Cation/Angresium         49           Cation/Angresium         Cation/Phosphorus	CationCalcium	4.02	CationCalcium	165	CationCalcium	93		
CationMagnesium         0.49         CationManganese         0.7         CationManganese         0.9           CationManganese         0.00         CationPhosphorus         CationStrontium         0.09         CationStrontium         0.02         CationStrontium         0.02         CationStrontium         0.22         CationStrontium         CationStrontium         CationStrontium         CationStrontium         CationCationAluminum         CationAluminum         CationAluminum <t< td=""><td>CationIron</td><td>7.23</td><td>CationIron</td><td>135</td><td>CationIron</td><td></td></t<>	CationIron	7.23	CationIron	135	CationIron			
CationManganese         0.07         CationManganese         0.9           CationPhosphorus         CationPhosphorus         CationPhosphorus         CationPhosphorus           CationPhosphorus         CationPhosphorus         CationPhosphorus         CationStornium         0.1           CationStornium         0.09         CationStornium         0.1         CationStornium         0.21           CationStornium         0.229         CationStornium         0.65         CationStornium         0.1           CationStornium         CationStornium         CationStornium         CationStornium         12.14           CationAluminum         CationCapper         CationAluminum         CationCapper         CationCapper           CationCapper         CationCationEad         CationCationCad         CationChickel         CationChickel           CationCopati         CationCapit         CationChickel         CationChickel         CationChickel           CationCopati         CationMolydenum         CationMolydenum         CationMolydenum         CationStilcon           CationStilcon         CationStilcon         CationMolydenum         CationStilcon         CationMolydenum           AnionChoride         288         AnionChoride         84         AnionChoride         84		0.49	CationMagnesium	83	CationMagnesium			
CationPhosphorus         CationPhosphorus         CationPotassium           CationPotassium         CationPotassium         0.1 CationStrontium         0.1 CationStrontium         0.2 CationSolum           CationSilica         CationSilica         CationSilica         CationSilica         CationSilica           CationSilica         CationSilica         CationSilica         CationSilica         CationSilica           CationAluminum         CationAluminum         CationAluminum         CationCopper         CationCopper           CationCopper         CationCopper         CationCopper         CationCopper         CationCopper           CationCopper         CationCobalt         CationCobalt         CationCobalt         CationCobalt           CationCobalt         CationCobalt         CationSilicon         CationSilicon         CationSilicon           CationMolybdenum         CationSilicon         CationSilicon         CationSilicon         CationSilicon           CationMolybdenum         CationSilicon         CationSilicon         CationSilicon         CationSilicon           CationSilicon         CationSilicon         CationSilicon         CationSilicon         CationSilicon           CationSilicon         CationSilicon         CationSilicon         CationSilicon         CationSilicon <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td></tr<>								
CationPlotassium         CationPlotassium         CationStrontium         0.0           CationStrontium         0.0         CationStrontium         0.1         CationStrontium         0.2           CationStontium         CationStrontium         CationStrontium         0.2         CationStrontium         0.2           CationStontium         CationAluminum         CationCopper         CationCopper         CationCopper         CationCopper         CationCopolitic         CationAluminum         CationCopolitic         CationCopolitic         CationAlumice         CationCopolitic         CationCopolitic         CationCopolitic         CationCopolitic         CationCopolitic         CationCopolitic         CationAlumice         CationCopolitic         CationAlumice         CationAlumice         CationCopolitic         CationAlumice         CationCopolitic         CationAlumice         CationCopolitic			0		0			
CationSodium         82.29         CationSilica         CationSilica         CationSilica           CationSilica         CationSilica         CationSilica         CationSilica           CationZinc         CationZinc         CationCoper         CationCoper           CationAluminum         CationCoper         CationCopper         CationCopper           CationLead         CationCoper         CationCopper         CationCopper           CationLikel         CationNikel         CationNikel         CationCopolitica           CationCobalt         CationCobalt         CationSilicon         CationSilicon           CationSilicon         CationSilicon         CationSilicon         CationSilicon           CationNickel         CationMolybdenum         CationSilicon         CationSilicon           CationMolybdenum         CationMolybdenum         CationSilicon         CationSilicon           CationSilicon         CationMolybdenum         CationSilicon         CationSilicon           CationSilica         AnionBromide         AnionBromide         AnionBromide           AnionBromide         AnionBromide         AnionBromide         AnionPydroxyl         O           AnionBromide         AnionPydroxyl         O         OnionSuffate         108           A	CationPotassium							
CationSilica         CationSilica         CationSilica           CationZinc         CationSilica         CationZinc           CationCopper         CationCopper         CationCopper           CationCopper         CationCopper         CationCopper           CationCopper         CationCopper         CationCopper           CationLithium         CationLithium         CationCopal           CationCobalt         CationCobalt         CationCobalt           CationChornium         CationChornium         CationCobalt           CationNickel         CationNickel         CationNickel           CationSilicon         CationSilicon         CationSilicon           CationNickel         OAnionCarbonate         0 AnionCarbonate           AnionCarbonate         OAnionCarbonate         0 AnionCarbonate           AnionFiboride         AnionFiboride         AnionFiboride           AnionFiboride	CationStrontium	0.09	CationStrontium	0.1	CationStrontium	0.2		
CationSilica         CationZinc         CationZinc           CationZinc         CationZinc         CationZinc           CationAluminum         CationAluminum         CationCopper           CationCopper         CationCopper         CationLead           CationLead         CationLinum         CationLead         CationLinum           CationCopalt         CationCobalt         CationCobalt         CationCobalt           CationSilicon         CationSilicon         CationSilicon         CationSilicon           CationNickel         CationMolybdenum         CationMolybdenum         CationSilicon           CationSilicon         CationSilicon         CationSilicon         CationSilicon           CationNibride	CationSodium	82.29	CationSodium	-66.59	CationSodium	12.14		
CationZinc         CationZinc         CationAluminum           CationAluminum         CationAluminum         CationAluminum           CationCopper         CationCopper         CationCopper           CationLinkum         CationLinkum         CationLinkum           CationLinkum         CationLinkum         CationLinkum           CationLinkum         CationCobalt         CationCobalt           CationLinkum         CationCobalt         CationChromium           CationAlobenum         CationCobalt         CationChromium           CationAlobenum         CationChromium         CationMolybdenum           CationAlobenum         CationChromium         CationAlobenum           CationAlobenum         CationAlobybdenum         CationAlobenum           CationAlobenum         CationAlobybdenum         CationAlobenum           CationAlobenum         CationAlobybdenum         CationAlobybdenum           CationAlobybdenum         CationAlobybdenum         CationAlobybdenum           CationBloride         AnionChioride         280           AnionBrande         AnionBrande         AnionBrande           AnionBrande         AnionHydroxyl         O AnionAlobydroxyl         O           AnionBrande         AnionNitrate         AnionNitrate         <	CationSilica		CationSilica		CationSilica			
CationCopper         CationCopper         CationCopper           CationLead         CationLead         CationLead         CationLead           CationLithium         CationLithium         CationLithium         CationNickel         CationNickel           CationCobalt         CationCobalt         CationCobalt         CationCobalt         CationSilicon           CationCobalt         CationMolybdenum         CationMolybdenum         CationMolybdenum         CationMolybdenum           CationChordie         50.05         AnionChoride         288         AnionChoride         84           AnionEcarbonate         0         AnionBicarbonate         0         AnionBicarbonate         0           AnionBromide         AnionPhormide         AnionPhormide         AnionPhorphate         280           AnionPhorphate         AnionPhorphate         4nionPhorphate         280           AnionSulfate         0         100	CationZinc							
CationCopper         CationCopper         CationCopper           CationLead         CationLead         CationLead         CationLead           CationLithium         CationLithium         CationLithium         CationNickel         CationNickel           CationCobalt         CationCobalt         CationCobalt         CationCobalt         CationSilicon           CationCobalt         CationMolybdenum         CationMolybdenum         CationMolybdenum         CationMolybdenum           CationChordie         50.05         AnionChoride         288         AnionChoride         84           AnionEcarbonate         0         AnionBicarbonate         0         AnionBicarbonate         0           AnionBromide         AnionPhormide         AnionPhormide         AnionPhorphate         280           AnionPhorphate         AnionPhorphate         AnionPhorphate         280           AnionPhorphate         AnionPhorphate         AnionPhorphate         280           AnionPhorphate         AnionPhorphate         AnionPhorphate         280           AnionPhorphate         AnionPhorphate         AnionPhorphate         280           AnionSulfate         0         155         AnionPhorphate         280           AnionSulfate         0         160 <td>CationAluminum</td> <td></td> <td>CationAluminum</td> <td></td> <td></td> <td></td>	CationAluminum		CationAluminum					
CationLead       CationLead       CationLead         CationLithium       CationLithium       CationNickel       CationNickel         CationNickel       CationNickel       CationNickel       CationNickel         CationNickel       CationNickel       CationNickel       CationNickel         CationNomum       CationNomum       CationNomum       CationNomum         CationNolybdenum       CationNolybdenum       CationNolybdenum         CationNontde       208       AnionChoride       84         AnionChoride       208       AnionChoride       84         AnionChoride       208       AnionChoride       84         AnionChoride       208       AnionChoride       84         AnionChoride       AnionPhorphate       0       AnionPhorphate       0         AnionFluoride       AnionPhorphate       AnionPhorphate       AnionPhorphate       108         AnionSulfate       0       AnionSulfate       155       AnionNitrate       108         AnionSulfate       0       AnionSulfate       166       64       166       64       166       64       66       66       66       66       66       66       66       66       66       66       66								
CationLithium         CationLithium         CationLithium           CationLickel         CationNickel         CationCobalt         CationCobalt           CationChomium         CationCobalt         CationChomium         CationChomium           CationChomium         CationChomium         CationMolybdenum         CationMolybdenum           CationMolybdenum         CationMolybdenum         CationMolybdenum         CationMolybdenum           AnionCarbonate         0         AnionCarbonate         0           AnionBicarbonate         171.08         AnionBicarbonate         50           AnionFluoride         AnionFluoride         AnionFluoride         AnionFluoride           AnionFluoride         AnionPhydroxyl         0         AnionHydroxyl         0           AnionPhosphate         AnionPhosphate         AnionSulfate         108           AnionPhosphate         AnionPhosphate         AnionSulfate         108           AnionPhosphate         AnionSulfate         108         AnionSulfate         108           PhiCaluated         5.64         phCalculated         5.61         phCalculated         5.61           DherryBeld/Kalinity         OtherSpecificGravity         0         OtherSpecificGravity         0           OtherSpecificGr								
CationNickel         CationNickel         CationCobalt           CationCobalt         CationCobalt         CationCobalt           CationChromium         CationChromium         CationChromium           CationMolybdenum         CationMolybdenum         CationMolybdenum           CationChromium         CationMolybdenum         CationMolybdenum           CationAnorbonate         0         AnionChoride         288           AnionBcarbonate         1108         AnionBcarbonate         50           AnionBromide         AnionRhomide         AnionPhrosphate         280           AnionPhytoxyl         AnionHydroxyl         0         AnionNutrate           AnionPhytoxyl         AnionPhytoxyl         0         AnionNutrate           AnionPhytoxyl         AnionPhytoxyl         0         AnionNutrate           AnionPhytoxyl         AnionPhytoxyl         0         AnionNutrate           AnionPhytoxyl         AnionPhytoxyl         0         AnionNutrate         108           phField         phField         5.31         phField         6.51           phCalculated         5.64         phCalculated         101herSpecificGravity         0           OtherSpecificGravity         0         OtherSpecificGravity         0 <td>CationLithium</td> <td></td> <td></td> <td></td> <td></td> <td>1</td>	CationLithium					1		
CationCobalt         CationChornium         CationChromium         CationChromium           CationRincon         CationSilicon         CationSilicon         CationSilicon           CationMolybdenum         CationMolybdenum         CationMolybdenum         CationSilicon           AnionCarbonate         0 AnionCarbonate         0 AnionCarbonate         0 AnionCarbonate         0 AnionFluoride           AnionBicarbonate         171.08         AnionBicarbonate         50 AnionBicarbonate         280           AnionFluoride         AnionFluoride         AnionFluoride         AnionFluoride           AnionFluoride         AnionFluoride         AnionFluoride         AnionPhosphate           AnionPhosphate         AnionSurfate         155         AnionPhosphate           AnionPhosphate         AnionSurfate         155         AnionPhosphate           AnionPhosphate         AnionSurfate         155         AnionSurfate         108           PhField         phField         5.64         phCalculated         5.64         phCalculated         5.64         phCalculated         5.64         phCalculated         5.64         phCalculated         5.64         phCalculated         104         64         104         65.19         01467562         01467562         01467562						1 1		
CationChromium         CationChromium         CationSilicon           CationMolybdenum         CationMolybdenum         CationMolybdenum           AnionChloride         50.05         AnionChloride         288           AnionChloride         0         AnionChloride         288           AnionBicarbonate         0         AnionBicarbonate         0           AnionBicarbonate         171.08         AnionBicarbonate         50           AnionBicarbonate         171.08         AnionFlucarbonate         50           AnionBicarbonate         171.08         AnionFlucarbonate         50           AnionHydroxyl         AnionHydroxyl         0         AnionHydroxyl         0           AnionNitrate         AnionNitrate         AnionSulfate         155         AnionSulfate         108           AnionSulfate         0         AnionSulfate         155         AnionSulfate         108           phField         5.64         phCalculated         phCalculated         6.51         phCalculated           TempField         TempField         60         TempField         64         TempField         64           OtherSpecificGravity         0         OtherSpecificGravity         0         OtherCaC03         0	CationCobalt					1		
CationSilicon         CationSilicon         CationMolybdenum         CationMolybdenum           CationMolybdenum         CationMolybdenum         CationMolybdenum         CationMolybdenum           AnionChoride         50 AnionChoride         288 AnionChoride         84           AnionCarbonate         0 AnionBromide         AnionBromide         AnionBromide           AnionFluoride         AnionFluoride         AnionFluoride         AnionFluoride           AnionPydroxy1         0 AnionNitrate         AnionPydroxy1         0           AnionPydroxy1         0 AnionNitrate         AnionPhosphate         AnionPhosphate           AnionPhosphate         AnionSulfate         155 AnionSulfate         108           PhField         phField         5.31 phField         6.51           phField         TempField         60 TempField         64           TempLab         TempLab         TempLab         TempLab           OtherFieldAlkalinity         OtherFoS         810.31 OtherTOS         876.34           OtherCO2         0 DissolvedCO2         280         DissolvedCO2         110           DissolvedCO2         0 DissolvedCO2         0 DissolvedCO2         0.50         0.50           DissolvedCO2         0 DissolvedCO2         0 DissolvedCO2			CationChromium					
CationMolybdenum         CationMolybdenum         CationMolybdenum           AnionChloride         288 AnionChloride         84 AnionChloride         84 AnionChloride         84 AnionChloride         84 AnionChloride         84 AnionChloride         84 AnionChloride         84 AnionElarbonate         0 AnionChloride         84 AnionElarbonate         0 AnionChloride         84 AnionElarbonate         280 AnionBicarbonate         280 AnionElarbonate         280 AnionElarb	CationSilicon					1		
AnionChloride         50.05         AnionChloride         288         AnionChloride         84           AnionBicarbonate         0         AnionBicarbonate         0         AnionBicarbonate         0           AnionBicarbonate         171.08         AnionBicarbonate         50         AnionBicarbonate         280           AnionBicarbonate         AnionBicarbonate         50         AnionBicarbonate         280           AnionBicarbonate         AnionBicarbonate         280         AnionBicarbonate         280           AnionHydroxyl         AnionFluoride         AnionPhydroxyl         0         AnionNitrate           AnionPhosphate         AnionPhosphate         AnionSulfate         108           AnionSulfate         0         AnionSulfate         108           phField         phField         5.31         phField         6.51           phField         TempField         60         TempField         64           TempLab         TempField         60         TempField         64           OtherSpecificGravity         0         OtherSpecificGravity         0         0           OtherSpecificGravity         1         OtherCacO3         0         0         0           OtherConductivit								
AnionCarbonate       0       AnionCarbonate       0       AnionCarbonate       0         AnionBicarbonate       171.08       AnionBicarbonate       50       AnionBicarbonate       280         AnionFluoride       AnionFluoride       AnionBromide       AnionBromide       AnionBromide       AnionBromide         AnionFluoride       AnionFluoride       AnionPhydroxyl       0       AnionPhydroxyl       0         AnionNitrate       AnionNitrate       AnionPhosphate       AnionPhosphate       108         AnionPhosphate       AnionSulfate       155       AnionSulfate       108         phField       phField       5.64       phField       6.51         phCalculated       5.64       phCalculated       6.41       64         TempField       TempLab       TempLab       TempLab       104       64         OtherSpecificGravity       0       OtherSpecificGravity       0       0467.634       64         OtherCodO3       12.06       OtherCodO3       040       64       64       64         TempLab       TempLab       TempLab       TempLab       876.34       04       64         OtherCodO3       12.06       OtherCodO3       040       64       64		50.05	2	288		84		
AnionBicarbonate       171.08       AnionBicarbonate       50       AnionBicarbonate       280         AnionFluoride       AnionFluoride       AnionFluoride       AnionFluoride       AnionFluoride         AnionFluoridydroxyl       AnionHydroxyl       0       AnionFluoride       AnionFluoride         AnionPhosphate       AnionPhosphate       AnionPhosphate       AnionSulfate       108         AnionSulfate       0       AnionSulfate       155       AnionSulfate       108         phField       5.64       phCalculated       phCalculated       6.51       phCalculated       6.51         phCalculated       5.64       phCalculated       phCalculated       6.51       phCalculated       64         TempField       TempLab       TempLab       TempLab       0       0       0         OtherFieldAlkalinity       OtherFieldAlkalinity       0 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
AnionBromideAnionBromideAnionBromideAnionFluorideAnionFluorideAnionFluorideAnionHydroxylAnionHydroxyl0AnionHydroxylAnionHydroxyl0AnionPhosphateAnionNitrateAnionPhosphateAnionSulfate155AnionSulfate0DhCalculated5.64phField5.64phCalculated5.64DeCalculatedphFieldCherrigical6.51phField108phField60TempField60TempField60TempField0OtherSpecificGravity0OtherSpecificGravity0OtherSpecificGravity0OtherSpecificGravity0OtherCaC030OtherConductivity1266.11OtherConductivity1369.28DissolvedC020DissolvedC020DissolvedC020DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20DissolvedC20Dissolve						280		
AnionFluoride       AnionFluoride       AnionFluoride         AnionFluoride       AnionFluoride       AnionFluoride         AnionNitrate       AnionNitrate       AnionPhosphate         AnionSulfate       AnionPhosphate       AnionPhosphate         AnionSulfate       0       AnionSulfate       155         AnionSulfate       0       5.64       phField       5.31         phCalculated       5.64       phCalculated       6.51         phCalculated       5.64       phCalculated       64         TempField       TempField       60       TempField       64         TempLab       TempLab       TempLab       0       0       0       0         OtherFieldAlkalinity       OtherFieldAlkalinity       0<								
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AnionNitrate       AnionNitrate       AnionNitrate         AnionPhosphate       AnionPhosphate       AnionPhosphate         AnionSulfate       0 AnionSulfate       155 AnionSulfate         Displeted       phField       5.31 phField       6.51         phField       5.44 phCalculated       phCalculated       9hCalculated         TempField       TempField       60 TempField       64         TempLab       TempLab       TempLab       0therSpecificGravity       0 OtherSpecificGravity       0 OtherSpecificGravity       0 OtherSpecificGravity       0 OtherSpecificGravity       0 OtherCaC03       0therCaC03       0therCaC03       0therCaC03       0therCaC03       0therCaC03       0therCaC03       0therCaC03       0therCaC02       0 DissolvedC02       0 GasC02PP       0 GasH2SP       0 GasH2SP       0 0.83       0.83       0.83       0.83       0.83       0.83       0.83       0.83       0.83       0.83       0.83       0.85       0.85       0.85       0.85       0.85       0.85       0.85       0.85       0.85				0		0		
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OtherTDS         315.26         OtherTDS         810.31         OtherTDS         876.34           OtherCaCO3         12.06         OtherCaCO3         OtherCaCO3<		1		0		0		
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DissolvedO2         DissolvedO2         DissolvedO2           DissolvedH2S         0         DissolvedH2S         0.15           GasPressure         GasPressure         100         GasPressure         100           GasCO2         GasCO2         0         GasCO2         0           GasCO2PP         GasCO2PP         0         GasCO2PP         0           GasH2S         GasH2S         0         GasH2SPP         0           PitzerCaCO3_70         PitzerCaCO3_70         -2.54         PitzerCaCO3_70         -0.81           PitzerSA4_70         PitzerGaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerSA4_70         PitzerGaSO4_70         -2.68         PitzerSA54_70         -2.54           PitzerGaSO4_70         PitzerGaSO4_70         -2.68         PitzerSA54_70         -2.54           PitzerGaSO4_70         PitzerGaSO4_70         -2.68         PitzerSA54_70         -2.54           PitzerGaSO4_220         PitzerGaSO4_220         PitzerFaSO4_220         -0.01           PitzerGaSO4_220         PitzerGaSO4_220         PitzerFaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerSA54_220         -0.22           PitzerSrSO4_220         Pit	OtherConductivity		OtherConductivity	1266.11	OtherConductivity	1369.28		
DissolvedH2S         0         DissolvedH2S         0.15         DissolvedH2S         0.52           GasPressure         GasPressure         100         GasPressure         100           GasCO2         GasCO2         0         GasCO2         0           GasCO2PP         GasCO2PP         0         GasCO2PP         0           GasH2S         GasH2S         0         GasH2S         0           GasH2SPP         GasH2SPP         0         GasH2SPP         0           PitzerCaCO3_70         PitzerCaCO3_70         -2.54         PitzerCaCO3_70         -0.81           PitzerSo4_70         PitzerGaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerSo4_70         PitzerGaSO4_70         -1.15         PitzerCaCO3_70         -1.54           PitzerSo4_70         PitzerSo4_70         -2.68         PitzerSo4_70         -2.54           PitzerGaCO3_220         PitzerGaCO3_220         PitzerFeCO3_70         -2.54           PitzerGaCO3_220         PitzerGaCO3_220         -0.01           PitzerGaCO4_220         PitzerGaCO3_220         -0.02           PitzerGaSO4_220         PitzerGaSO4_220         -0.22           PitzerCaSO4_220         PitzerSrSO4_220         -1.43	DissolvedCO2	0	DissolvedCO2	280	DissolvedCO2	110		
GasPressure         GasPressure         100         GasPressure         100         GasPressure         100         GasCO2         0         GasH2S         0	DissolvedO2		DissolvedO2		DissolvedO2			
GasCO2         GasCO2         0         GasCO2         0           GasCO2PP         GasCO2PP         0         GasCO2PP         0         GasCO2PP         0           GasH2S         GasH2S         0         GasH2S         0         GasH2S         0           GasH2SPP         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0           PitzerCaCO3_70         PitzerCaCO3_70         -2.54         PitzerCaCO3_70         -0.81           PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSSO4_70         PitzerSrSO4_70         -2.68         PitzerSrS04_70         -2.54           PitzerFaCO3_70         PitzerFaCO3_70         PitzerFaCO3_70         -2.54         PitzerFaCO3_70           PitzerCaCO3_220         PitzerCaCO3_220         PitzerFaCO3_70         PitzerFaCO3_70         -2.54           PitzerCaCO3_220         PitzerCaCO3_220         PitzerFaCO3_70         -2.68         PitzerFaCO3_220         -0.01           PitzerBaSO4_220         PitzerGaCO3_220         PitzerGaCO3_220         -0.02         -0.02         -0.02         -0.02	DissolvedH2S	0	DissolvedH2S	0.15	DissolvedH2S	0.52		
GasCO2PP         GasCO2PP         O         GasCO2PP         O           GasH2S         GasH2S         O         GasH2S         O           GasH2SPP         GasH2SPP         O         GasH2SPP         O           PitzerCaCO3_70         PitzerCaCO3_70         -2.54         PitzerCaCO3_70         -0.81           PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaCO3_70         PitzerSiSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSiSO4_70         PitzerSiSO4_70         -2.68         PitzerSiSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerSiSO4_70         -2.54         PitzerSiSO4_70         -2.54           PitzerFeCO3_70         PitzerSiSO4_70         -1.54         PitzerSiSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerSiSO4_70         -2.54           PitzerFeCO3_70         PitzerGaCO3_220         PitzerGaCO3_220         -0.01           PitzerCaCO3_220         PitzerGaSO4_220         PitzerGaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerGaSO4_220         -1.43           PitzerSiSO4_220         PitzerSiSO4_220         Pi	GasPressure		GasPressure	100	GasPressure	100		
GasH2S         GasH2S         0         GasH2S         0           GasH2SPP         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0           PitzerCaC03_70         PitzerCaC03_70         -2.54         PitzerCaC03_70         -0.81           PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaC03_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrS04_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerFeC03_70         PitzerFeC03_70         PitzerSrS04_70         -2.54           PitzerCaC03_220         PitzerCaC03_220         PitzerSrS04_70         -2.54           PitzerCaC03_220         PitzerCaC03_220         PitzerCaC03_220         -0.01           PitzerCaC03_220         PitzerCaC03_220         PitzerCaC03_220         -0.02           PitzerBaSO4_220         PitzerCaSO4_220         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34	GasCO2							
GasH2SPP         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0         GasH2SPP         0         PitzerCaC03_70         -0.81         PitzerCaC03_70         -0.81         PitzerCaC03_70         -0.81         PitzerCaC03_70         -0.81         PitzerBaSO4_70         0.33         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33         PitzerCaSO4_70         -1.54         PitzerCaSO4_70         -1.54         PitzerCaSO4_70         -1.54         PitzerCaSO4_70         -1.54         PitzerSrSO4_70         -2.54         PitzerSrSO4_70         -2.54         PitzerCaSO4_70         -2.54         PitzerSrSO4_70         -2.54         PitzerSrSO4_70         -2.54         PitzerCaSO3_70         PitzerSrSO4_70         -2.54         PitzerSrSO4_70         -2.54         PitzerSrSO4_70         -2.54         PitzerCaC03_220         PitzerFeC03_70         -2.54         PitzerCaC03_220         PitzerSrSO4_70         -2.54         PitzerSrSO4_220         -0.01         PitzerSrSO4_220         -0.01         PitzerCaC03_220         PitzerCaC03_220         -0.01         PitzerBaSO4_220         -0.02         PitzerCaSO4_220         -0.22         PitzerCaSO4_220         -0.22         PitzerCaSO4_220         -0.22         PitzerSrSO4_220         -0.22         PitzerSrSO4_220         -1.43         PitzerSrSO4_220         <	GasCO2PP		GasCO2PP	0	GasCO2PP	0		
PitzerCaCO3_70         PitzerCaCO3_70         -2.54         PitzerCaCO3_70         -0.81           PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrSO4_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerFeCO3_70         PitzerFeCO3_70         PitzerSrSO4_70         -2.54           PitzerCaCO3_220         PitzerCaCO3_220         PitzerFeCO3_70           PitzerBaSO4_220         PitzerCaCO3_220         PitzerBaSO4_220         -0.01           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.22           PitzerSrSO4_220         PitzerSrSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         -2.34	GasH2S		GasH2S	0	GasH2S	0		
PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrSO4_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerCaCO3_20         PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70         PitzerSrSO4_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22         PitzerCaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43         PitzerSrSO4_220         -2.34	GasH2SPP		GasH2SPP	0	GasH2SPP	0		
PitzerBaSO4_70         PitzerBaSO4_70         0.49         PitzerBaSO4_70         0.33           PitzerCaSO4_70         PitzerCaSO4_70         -1.15         PitzerCaSO4_70         -1.54           PitzerSrSO4_70         PitzerSrSO4_70         -2.68         PitzerSrSO4_70         -2.54           PitzerCaCO3_20         PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70         PitzerSrSO4_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22         PitzerCaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43         PitzerSrSO4_220         -2.34	PitzerCaCO3_70		PitzerCaCO3_70	-2.54	PitzerCaCO3_70	-0.81		
PitzerSrS04_70         PitzerSrS04_70         -2.68         PitzerSrS04_70         -2.54           PitzerFeC03_70         Pitzer	PitzerBaSO4_70		PitzerBaSO4_70	0.49	PitzerBaSO4_70	0.33		
PitzerSrS04_70         PitzerSrS04_70         -2.68         PitzerSrS04_70         -2.54           PitzerFeC03_70         Pitzer	PitzerCaSO4_70	1			—			
PitzerFeCO3_70         PitzerFeCO3_70         PitzerFeCO3_70           PitzerCaCO3_220         PitzerCaCO3_220         PitzerCaCO3_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.22           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -1.43	PitzerSrSO4_70		– PitzerSrSO4_70		—			
PitzerCaCO3_220         PitzerCaCO3_220         PitzerCaCO3_220         -0.01           PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -0.22           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34	PitzerFeCO3_70		_					
PitzerBaSO4_220         PitzerBaSO4_220         PitzerBaSO4_220         -0.22           PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34	PitzerCaCO3_220		PitzerCaCO3_220		PitzerCaCO3_220	-0.01		
PitzerCaSO4_220         PitzerCaSO4_220         PitzerCaSO4_220         -1.43           PitzerSrSO4_220         PitzerSrSO4_220         PitzerSrSO4_220         -2.34	PitzerBaSO4_220		-		· · · · · · · · · · · · · · · · · · ·			
PitzerSrSO4_220 PitzerSrSO4_220 -2.34	PitzerCaSO4_220		=					
	PitzerSrSO4_220				-			
	PitzerFeCO3_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
BEAVER LODGE COM 1M	3004535552

FRC Offs	MV	Offset	DK Offset			
AssetCode	3004527429	AssetCode	3004526343	AssetCode	3004526314	
AssetName	THOMPSON LS 3	AssetName	EPNG COM 1A	AssetName	SUNRAY 8	
CO2	0.02	CO2	0.02	CO2	0.02	
N2	0	N2	0	N2	0	
C1	0.88	C1	0.8	C1	0.92	
C2	0.06	C2	0.09	C2	0.05	
С3	0.03	C3	0.05	C3	0.01	
ISOC4	0	ISOC4	0.01	ISOC4	0	
NC4	0	NC4	0.01	NC4	0	
ISOC5	0	ISOC5	0.01	ISOC5	0	
NC5	0	NC5	0	NC5	0	
NEOC5		NEOC5		NEOC5		
С6	0	C6		C6		
C6_PLUS		C6_PLUS	0.01	C6_PLUS	0	
C7	0	C7		C7		
C8	0	C8		C8		
С9	0			С9		
C10		C10		C10		
AR		AR		AR		
CO		СО		CO		
H2		H2		H2		
02		02		02		
H20		H20		H20		
H2S	0	H2S		H2S		
HE		HE		HE		
C_O_S		C_O_S		C_O_S		
CH3SH		CH3SH		CH3SH		
C2H5SH		C2H5SH		C2H5SH		
CH2S3_2CH3S		CH2S3_2CH3S		CH2S3_2CH3S		
CH2S		CH2S		CH2S		
C6HV		C6HV		C6HV		
CO2GPM		CO2GPM	0	CO2GPM	0	
N2GPM		N2GPM	0	N2GPM	0	
C1GPM		C1GPM	0	C1GPM	0	
C2GPM		C2GPM	2.47	C2GPM	1.21	
C3GPM		C3GPM	1.31	C3GPM	0.26	
ISOC4GPM		ISOC4GPM	0.3	ISOC4GPM	0.11	
NC4GPM		NC4GPM	0.46	NC4GPM	0.06	
ISOC5GPM		ISOC5GPM	0.21	ISOC5GPM	0.06	
NC5GPM		NC5GPM	0.16	NC5GPM	0.03	
C6_PLUSGPM		C6_PLUSGPM	0.57	C6_PLUSGPM	0.14	

<b>ceived by Ocp</b> i 1426/20124 2:49:51 PM Office <u>District I</u> – (575) 393-6161	State of New Me Energy, Minerals and Natu			Form C-103 Revised July 18, 2013
1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> – (575) 748-1283         811 S. First St., Artesia, NM 88210 <u>District III</u> – (505) 334-6178         1000 Bio Program Rd, Artes NM 87410	OIL CONSERVATION 1220 South St. Fran		WELL API 1 5. Indicate 7 STAT	30-045-35552
1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> – (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM 87505	Santa Fe, NM 87		6. State Oil	& Gas Lease No. E-5383-6
SUNDRY NOTICI (DO NOT USE THIS FORM FOR PROPOSA DIFFERENT RESERVOIR. USE "APPLICA" PROPOSALS.)	TION FOR PERMIT" (FORM C-101) FO	UG BACK TO A		me or Unit Agreement Name Beaver Lodge Com nber 1M
2. Name of Operator HILCORP ENERGY COMPANY	as Well 🛛 Other		9. OGRID N	372171
<ol> <li>Address of Operator 382 Road 3100, Aztec, NM 87410</li> <li>Well Location</li> </ol>				ne or Wildcat Basin Fruitland Coal
4. Wen Location Unit Letter I : 2149 Section 32	feet from the <u>South</u> line a Township 30N	and <u>544</u> feet f Range 08W	rom the <u>Eas</u> NMPM	tline County San Juan
	11. Elevation (Show whether DR, 6217)	, RKB, RT, GR, etc.		
12. Check App	ropriate Box to Indicate Na	ture of Notice, R	Report or Otl	her Data
TEMPORARILY ABANDON	ENTION TO: PLUG AND ABANDON CHANGE PLANS MULTIPLE COMPL	SUB REMEDIAL WOR COMMENCE DRI CASING/CEMEN	K LLING OPNS.	REPORT OF:         ALTERING CASING         P AND A
CLOSED-LOOP SYSTEM OTHER: RECOMPLETE 13. Describe proposed or complete of starting any proposed work). proposed completion or recomp	SEE RULE 19.15.7.14 NMAC.			
Hilcorp Energy Company requests p commingle with the existing Mesav natural gas management plan. A clo	erde/Dakota. Please see the attac			
Spud Date:	Rig Release Dat	e:		
hereby certify that the information abo	ve is true and complete to the bes	st of my knowledge	and belief.	
SIGNATURE <u>Cherylene West</u>	TITLE Operation	s/Regulatory Techn	ician – Sr. D	ATE 12/05/2023

Type or print name	Cherylene Weston	E-mail address:	cweston@hilcorp.com_	_ PHONE: _(713) 289-2615

#### For State Use Only

APPROVED BY:\_\_\_\_

-----

\_\_TITLE\_

\_DATE\_

.

Conditions of Approval (if any): Released to Imaging: 5/22/2024 4:03:35 PM

## Beaver Lodge Com 1M

## API#: 3004535552

## **Fruitland Coal Recompletion Procedure**

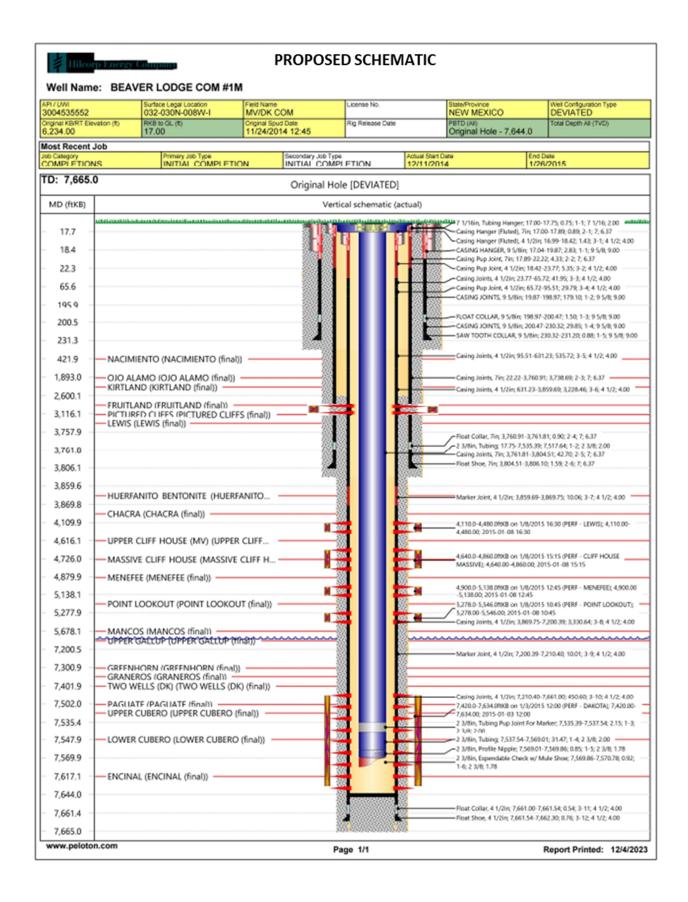
12/4/2023

## Procedure:

- 1. MIRU PU and associated equipment. Kill well and NDWH.
- 2. NUBOP, unseat tubing, tag for fill and lay down 2-3/8" string
- 3. Set 4.5" CIBP at +/-4100' to isolate existing Mesaverde and Dakota Perforations
- 4. RU wellcheck and MIT wellbore to 500 PSI
- 5. Perforate and frac the Fruitland Coal from 2785' to 3116'.
- 6. MI flow back and flow well to relieve pressure if needed.
- 7. MIRU service rig and test BOP's.
- 8. Cleanout sand and plugs to PBTD.
- 9. TIH and land 2-3/8" production tubing in Dakota.
- 10. ND BOP's, NU production tree.
- 11. RDMO service rig & turn well over to production as commingled Fruitland Coal/Mesaverde/Dakota producer.

•

	BIRING COM		Schematic - Cu	rrent			
97.UWI	Surface Legal Location	Field Name	License No.		State/Province		Well Configuration Type
004535552 riginal KB/RT Eleve	032-030N-008W-1 tion (t) RKB to GL (t)	MV/DK COM Original Spud D		Date	NEW MEXICO PBTD (AII)		DEVIATED Total Depth All (TVD)
,234.00	17.00	11/24/2014	12:45		Original Hole - 7,	644.0	
lost Recent Je to Category	Primary Job Type	S	econdary Job Type	Actual Sta		End	
OMPLETIONS		FTION	NITIAL COMPLETION	12/11/2	014	1/26	3/2015
D: 7,665.0			Original Hole [DEVIA	TED]			
MD (ftKB)			Vertical scheme	atic (actual)			
-	Harddaanaanaanaanaanaa	ninadimentation					17.75; 0.75; 1-1; 7 1/16; 2.00
17.7							00-17.89; 0.89; 2-1; 7; 6.37 16.99-18.42; 1.43; 3-1; 4 1/2; 4.00
18.4					CASING HANGER, 9 Casing Pup Joint, 7i		I-19.87; 2.83; 1-1; 9 5/8; 9.00 I2; 4.33; 2-2; 7; 6.37
22.3					Casing Pup Joint, 4	1/2in; 18.42	23.77; 5.35; 3-2; 4 1/2; 4.00 72; 41.95; 3-3; 4 1/2; 4.00
65.6				500 80	Casing Pup Joint, 4	1/2in; 65.72	95.51; 29.79; 3-4; 4 1/2; 4.00
195.9					CASING JOINTS, 9 5	/8in; 19.87-	198.97; 179.10; 1-2; 9 5/8; 9.00
200.5							200.47; 1.50; 1-3; 9 5/8; 9.00
231.3							-230.32-231.20; 0.88; 1-5; 9 5/8; 9.00 30.32-231.20; 0.88; 1-5; 9 5/8; 9.00
421.9	-NACIMIENTO (NACIMIENTO (	fically			Casing Joints, 4 1/2i	rx 95.51-631	23; 535.72; 3-5; 4 1/2; 4.00
1,893.0	<ul> <li>OJO ALAMO (OJO ALAMO (fir</li> <li>KIRTLAND (KIRTLAND (final))</li> </ul>	iai)J					1; 3,738.69; 2-3; 7; 6.37 859.69; 3,228.46; 3-6; 4 1/2; 4.00
2,600.1	FRUITLAND (FRUITLAND (fina						
3,116.1	PICTURED CLIFFS (PICTURED (     LEWIS (LEWIS (final))						
3,757.9 -	cervis (cervis (inial))				Float Collar, 7in; 3,7	50.91-3,761	81; 0.90; 2-4; 7; 6.37
3,761.8					-2 3/8in, Tubing: 17.2	5-7,535.39;	7,517,64; 1-2; 2 3/8; 2.00
3,806.1					Float Shoe, 7irc 3,80		
3.859.6			1010101	2000000			
-	HUERFANITO BENTONITE (H	JERFANITO			Marker Joint, 4 1/2ir	r; 3,859.69-3	,869.75; 10.06; 3-7; 4 1/2; 4.00
3,869.8	- CHACRA (CHACRA (final)) -						
4,109.9			1 200	200	4,110.0-4,490.0%8 4,480.00; 2015-01-0		16:30 (PERF - LEWIS); 4,110.00-
4,616.1	- UPPER CLIFF HOUSE (MV) (U	PPER CLIFF					
4,726.0	MASSIVE CLIFF HOUSE (MAS	SIVE CLIFF H	355	122	4,640.0-4,860.01tKB MASSIVEL: 4,640.00		5 15:15 (PERF - CLIFF HOUSE
4,879.9				100			
5,138.1				100	4,900.0-5,138.0t/KB -5,138.00; 2015-01-6	on 1/8/2015 08 12:45	12:45 (PERF - MENEFEE); 4,900.00
5,277.9	POINT LOOKOUT (POINT LOC	DKOUT (final)) -			5,278.0-5,546.01%B		0.45 (PERF - POINT LOOKOUT);
	MANCOG ALANCOG (EP)		800	500			7,200.39; 3,330.64; 3-8; 4 1/2; 4.00
	- MANCOS (MANCOS (finali) -	P (Hhat))		S			*****
7,200.5				899 382	Marker Joint, 4 1/2ir	; 7,200.39-7	,210,40; 10.01; 3-9; 4 1/2; 4.00
7,300.9	GREENHORN (GREENHORN ( GRANEROS (GRANEROS (final						
7,401.9	TWO WELLS (DK) (TWO WELL						
7,502.0	PAGLIATE (PAGLIATE (final))			100-1-			7,661.00; 450.60; 3-10; 4 1/2; 4.00 5 12:00 (PERF - DAKOTA); 7,420.00-
7,535.4	- UPPER CUBERO (UPPER CUBE	RO (final))		20-			arker; 7,535.39-7,537.54; 2.15; 1-3;
7,547.9	-LOWER CUBERO (LOWER CUB	ERO (final))	333	10%	2 3/8; 2 00		01; 31.47; 1-4; 2 3/8; 2.00
7,569.9			355	68	-2 3/8in, Profile Nipp	le; 7,569.01	-7,569.86; 0.85; 1-5; 2 3/8; 1.78 tule Shoe; 7,569.86-7,570.78; 0.92;
				- 88	2 3/8in, Espendable 1-6; 2 3/8; 1.78	CHIECK W/ N	ure snoe; 7,367.86-7,570.78;0.92;
7,617.1	- ENCINAL (ENCINAL (final))		332	100			
7,644.0				1000 X			
7,661.4							661.54; 0.54; 3-11; 4 1/2; 4.00 62.30; 0.76; 3-12; 4 1/2; 4.00
7,665.0				222 222			



Received by OCD: 1/26/2024 2:49:51 PM

#### 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

Page 19 of 53

Permit 355134

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number	2. Pool Code	3. Pool Name				
30-045-35552	71629	BASIN FRUITLAND COAL (GAS)				
4. Property Code	5. Property Name	6. Well No.				
319133	BEAVER LODGE COM	001M				
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	<sup>9. Elevation</sup> 6217				

#### 10. Surface Location UL - Lot Lot Idn N/S Line E/W Line Section Feet From County Township Range Feet From 32 30N 08W S SAN JUAN 2149 544 Е

11. Bottom I	Hole Location	If Different Fi	rom Surface	

UL - Lot	Section	32	Township 30N	Range 08W	Lot Idn	Feet From 1116	N/S Line	S	Feet From 723	E/W Line	Ε	County SAN JUAN
12. Dedicated 32	Acres 0.00			13. Joint or Infill		14. Consolidatio	on Code			15. Order N	lo.	

#### 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: Cherylene Weston
Title: Cherylene Weston
Date: 12/04/2023
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: Marshall W. Lindeen
Date of Survey: 1/17/2014
Certificate Number: 17078

Rec	eived	by	OCD:	1/26/2024	2:49:51 PM
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		ubmit Electronically ia E-permitting					
		ATURAL G					
This Natural Gas Manag	gement Plan mi	Section	1th each Applicat	escription	)rıll (Al	D) for a new	v or recompleted well.
I. Operator: Hilcorp E	nergy Compar	ıy	OGRID:	372171		Date:	2 / 05 / 2023
II. Type: 🛛 Original	Amendment	due to □ 19.15.27	.9.D(6)(a) NMAC	C 🗆 19.15.27.9.D(	6)(b) N	MAC 🗆 Oth	er.
If Other, please describe	::						
<b>III. Well(s):</b> Provide the be recompleted from a s					wells pro	oposed to be	drilled or proposed to
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D		cipated MCF/D	Anticipated Produced Water BBL/D
Beaver Lodge Com 1M	3004535552	P-32-30N-08W	1116 FSL, 723 FEL	0 bbl/d	195	mcf/d	1.2 bbl/d
IV. Central Delivery P	oint Name:	Chaco-Blar	nco Plant	<u> </u>		[See 19.1	5.27.9(D)(1) NMAC]
V. Anticipated Schedul proposed to be recomple					ell or se	et of wells pro	oposed to be drilled or
Well Name	API	Spud Date	TD Reached Date	Completion Commencement		Initial Flow Back Date	
Beaver Lodge Com 1M	3004535552						<u>2024</u>
VI. Separation Equipn VII. Operational Prac Subsection A through F VIII. Best Managemen during active and planne	tices: 🛛 Attac of 19.15.27.8 ] ht Practices: 🛙	h a complete desc NMAC.	ription of the act	ions Operator will	l take to	o comply wit	h the requirements of

.

## 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.**  $\Box$  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  $\Box$  will  $\Box$  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  $\Box$  does  $\Box$  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:**  $\Box$  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.

## <u>Section 3 - Certifications</u> <u>Effective May 25, 2021</u>

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

 $\square$  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

 $\Box$  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.**  $\Box$  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.**  $\Box$  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:	Cherylene Weston
Printed Name:	Cherylene Weston
Title:	Operations/Regulatory Tech-Sr.
E-mail Address	cweston@hilcorp.com
Date:	12/05/2023
Phone:	713-289-2615
	OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:	
Title:	
Approval Date:	
Conditions of A	pproval:

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.



December 22, 2023

Mailed Certified / Electronic Return Receipt Requested

To: ALL INTEREST OWNERS

RE: Application to Downhole Commingle Production Well: Beaver Lodge Com 1M API: 30-045-35552 Section 32, Township 30 North, Range 08 West San Juan County, New Mexico

Ladies and Gentlemen:

Hilcorp Energy Company ("Hilcorp"), as Operator of the subject well, has filed application with the New Mexico Oil Conservation Division for approval to downhole commingle production from the **Fruitland Coal**, a formation Hilcorp soon intends to perforate, with existing production from the **Mesaverde and Dakota** formation. This letter and the application copy enclosed serve to provide you, an owner in one or more of the aforementioned formations, with written notice as prescribed by Subsection C of 19.15.12.11 New Mexico Administrative Code.

No action is required by you <u>unless</u> you wish to pursue a formal protest (see details italicized below).

If you no longer own an interest in this well or need to make changes to your address, etc., please email <u>ownerrelations@hilcorp.com</u>. For those without email access, please call (713) 209-2457.

Hilcorp is eager to explore this potential opportunity to enhance production. Thank you for your support.

Sincerely. Come Parters Phin

Carson Rice Landman – San Juan North (713) 757-7108 <u>carice@hilcorp.com</u>

cc:bmg Enclosures

#### Protesting:

Protests must be in writing and received with<u>in twenty (20) days from the date of this letter. In your</u> response, please include your contact information, details referenced herein and the specific concerns and/or reasoning behind your decision. You are encouraged to email me an electronic copy and, subsequently, mailing (overnight) a hard copy to my attention at the address in the footer below. Upon receipt, I will follow up by phone to discuss your concerns. Should we be unable to resolve them, a formal protest will be set for hearing with the New Mexico Oil & Conservation Division in Santa Fe, NM, wherein your attendance and testimony will be required.

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

#### Received by OCD: 1/26/2024 2:49:51 PM

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 Form C-107A Revised August 1, 2011

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

APPLICATION TYPE Single Well Establish Pre-Approved Pools EXISTING WELLBORE <u>X</u>Yes No

### APPLICATION FOR DOWNHOLE COMMINGLING

Hilcorp Energy Company		382 Road 3100, Aztec, NM 87410	
Operator		Address	
Beaver Lodge Com	1M	I, 32, T30N, R08W	San Juan County, NM
Lease	Well No.	Unit Letter-Section-Township-Range	County

OGRID No. <u>372171</u> Property Code <u>319133</u> API No. <u>30-045-35552</u> Lease Type: \_\_\_\_Federal <u>X</u> State \_\_\_\_Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE	
Pool Name	Basin Fruitland Coal	Blanco Mesaverde	Basin Dakota	
Pool Code	71629	72319	71599	
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2785′ – 3116′	4110′ – 5546′	7420′ – 7634′	
Method of Production (Flowing or Artificial Lift)	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)	178 psi	639 psi	126 psi	
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1121 BTU	1284 BTU	1057 BTU	
Producing, Shut-In or New Zone	New Zone	Producing	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: 9/1/2023 Oil: 0 bbls Rates: Gas: 2,123 Mcf Water: 18 bbls	Date: 9/1/2023 Oil: 0 bbls Rates: Gas: 2,394 Mcf Water: 22 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? If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?	Yes Yes_X	No No
Are all produced fluids from all commingled zones compatible with each other?	Yes_X	No
Will commingling decrease the value of production?	Yes	NoX
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 Cherylene Weston	TITLE Operations/Regulatory Tech-Sr.	DATE 12/12/2023
TYPE OR PRINT NAME Cherylene Weston	TELEPHONE NO. (	713 ) 289-2615

E-MAIL ADDRESS cweston@hilcorp.com

Certified Number	Sender	Recipient	Date Mailed	Delivery Status
92148969009997901831825807	Brenda Guzman	, LINDSAY PRODUCTION, and ROYALTIES LTD, FREDERICKSBURG, TX, 78624 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825814	Brenda Guzman	, THE NORDAN TRUST, RANDOLPH C MARCEAU TRUSTEE, SAN ANTONIO, TX, 78209 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825821	Brenda Guzman	, PRIMITIVE PETROLEUM INC, , MIDLAND, TX, 79707 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825838	Brenda Guzman	, WESLEY WEST MINERALS LTD, , HOUSTON, TX, 77001 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825845	Brenda Guzman	, KENNEDY MINERALS LTD, , MIDLAND, TX, 79701 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825852	Brenda Guzman	, MARGARET A KEARNS TRUST FBO, HELENE D GORMAN AND AS TRUSTEE, NAPLES, FL, 34102 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825869	Brenda Guzman	, MARGARET A KEARNS TRUST FBO, JAMES B DRAPER TRUSTEE, COLORADO SPRINGS, CO, 80904-1029 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825876	Brenda Guzman	, CYNTHIA GRAY MILANI ESTATE, BARBARA B GRAY INDEP EXECUTRIX, FT WORTH, TX, 76199-0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825883	Brenda Guzman	, STATE OF NEW MEXICO, BATAAN MEMORIAL BUILDING, SANTA FE, NM, 87501 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825890	Brenda Guzman	, ELLEN BOONE SCHWETHELM, , SAN ANTONIO, TX, 78209-6716 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825906	Brenda Guzman	, CLAUD W RAYBOURN, , APPLE VALLEY, CA, 92307 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825913	Brenda Guzman	, ELSR LP, C/O PETROLEDGER FINANCIAL SERV, FORT WORTH, TX, 76107 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825920	Brenda Guzman	, GROVER FAMILY LP, , MIDLAND, TX, 79702- 3666 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825937	Brenda Guzman	, ARCHER PEARL ENERGY LTD, , SAN ANTONIO, TX, 78209 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825944	Brenda Guzman	, CHARLES RUSSELL BELL JR, , BELLVILLE, TX, 77418-0042 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825951	Brenda Guzman	, VALERIE L JONES HUNDLEY, , CORPUS CHRISTI, TX, 78468-1242 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825968	Brenda Guzman	, JOHN HUNTER JONES, , AUSTIN, TX, 78746 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825975	Brenda Guzman	, JESSICA DAVANT STANLEY, , AUSTIN, TX, 78732 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825982	Brenda Guzman	, AMELIA ANNE SUNDBERG, , RICHMOND, TX, 77406-6727 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825999	Brenda Guzman	, HDBC INVESTMENTS LTD, A TEXAS LTD PTRSHP, DALLAS, TX, 75225 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826002	Brenda Guzman	, PAUL DAVIS LTD, , MIDLAND, TX, 79702 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826019	Brenda Guzman	, MULLIGAN LP, , RICHARDSON, TX, 75080- 4611 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826026	Brenda Guzman	, REBECCA ANN HOWARD MUNNELL, , SUGAR LAND, TX, 77479-1470	12/22/2023	

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02148969009997901831826033	Brenda Guzman	, RICHARD HOWARD, , HOUSTON, TX, 77024 Code: Beaver Lodge Com 1M DHC	12/22/2023	
02148969009997901831826040	Brenda Guzman	, ROBERT LOUIS HOWARD JR, , CLARKESVILLE, GA, 30523 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending Signature Pending
02148969009997901831826057	Brenda Guzman	, CROSS TIMBERS ENERGY LLC, C/O DRILLINGINFO MAIL, FORT WORTH, TX, 76102 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826064	Brenda Guzman	, WILLIAM C EILAND, , MIDLAND, TX, 79702 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826071	Brenda Guzman	, DELACOSTA ENERGY LP, ANTHONY SPEIER REGISTER AGENT, SAN ANTONIO, TX, 78212 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826088	Brenda Guzman	, PNH RESOURCES LLC, PHILIP N HUDSON MANAGER, SAN ANTONIO, TX, 78280 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826095	Brenda Guzman	, FRED ELDON SPENCER, and JANE B SPENCER JTWROS, MUSTANG, OK, 73064 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826101	Brenda Guzman	, JAMES R LEETON JR, , MIDLAND, TX, 79702 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826118	Brenda Guzman	, ROBERT UMBACH CANCER FOUNDATION, MARTINDALE CONSULTANTS INC AGENT, OKLAHOMA CITY, OK, 73112-2311 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826125	Brenda Guzman	, MARTHA M TUCKER, , HOUSTON, TX, 77252-2822 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826132	Brenda Guzman	, THOMPSON FAMILY LLC, , SANTA FE, NM, 87501 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826149	Brenda Guzman	, VIRGINIA THOMPSON CREPS REV TRUST, ELIZABETH R HARNED SUCC TRUSTEE, WEST CHESTER, PA, 19380 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826156	Brenda Guzman	, ATKO PARTNERS LTD, , HUNTSVILLE, TX, 77340 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826163	Brenda Guzman	, DAVID H GRAY, JPMORGAN CHASE BANK AGENT and AIF, FORT WORTH, TX, 76199- 0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826170	Brenda Guzman	, JOHN L GRAY, JPMORGAN CHASE BANK AGENT and AIF, FORT WORTH, TX, 76199- 0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826187	Brenda Guzman	, LAURA A GUNN, , SAN ANTONIO, TX, 78216-2227 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826194	Brenda Guzman	, SHARON A LONG, , BARTLESVILLE, OK, 74006 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826200	Brenda Guzman	, GUY DAVID WARD, , SPRING HILL, TN, 37174 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826217	Brenda Guzman	, TIMOTHY WINSTON WARD, , CARROLLTON, TX, 75007 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826224	Brenda Guzman	, JAMES WENDELL WEST, , LOS ANGELES, CA, 90049-8382 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826231	Brenda Guzman	, HELEN BLOXSOM DAVIS, , HOUSTON, TX, 77025 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826248	Brenda Guzman	, CORNELIA DAVANT PERRY, JAMES E DAVANT POA, BLESSING, TX, 77419-0206 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826255	Brenda Guzman	, DAVID ELBERT REESE, , RICHMOND, TX, 77469 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending

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92148969009997901831826262	Brenda Guzman	, WILLIAM SHUPP, , MURFREESBORO, TN, 37128 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826279	Brenda Guzman	, JAMES SHUPP, , SHREWSBURY, PA, 17361 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826286	Brenda Guzman	, ANGELA SLAIS, , GARDNERVILLE, NV, 86460 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826293	Brenda Guzman	, JEAN ASHLEY WARD CARTER, , HOUSTON, TX, 77062 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826309	Brenda Guzman	, SANDRA T CURRIE, , LLANO, TX, 78643 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826316	Brenda Guzman	, WILLIAM LOUIS DAVANT, , BLESSING, TX, 77419 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826323	Brenda Guzman	, JAMES E DAVANT DVM, , BLESSING, TX, 77419-0695 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826330	Brenda Guzman	, KATHRYN DAVANT DODSON, , CLARKSDALE, MS, 38614 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826347	Brenda Guzman	, THOMAS E DUNNAM III, , SAN ANTONIO, TX, 78269 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826354	Brenda Guzman	, JAMES H ESSMAN, , MIDLAND, TX, 79702 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826361	Brenda Guzman	, WILLIAM F GORDON, , LE CLAIRE, IA, 52753 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826378	Brenda Guzman	, JULIE A GRAHAM, , NORTH PORT, FL, 34291 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826385	Brenda Guzman	, ADAIR M HADLEY, , SUNSET BEACH, NC, 28468 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826392	Brenda Guzman	, THEODORE W SCHICK JR, and MARCELLA MOYER SCHICK, ALLENTOWN, PA, 18104 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826408	Brenda Guzman	, BRADFORD TUCKER, , HOUSTON, TX, 77056-1421 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826415	Brenda Guzman	, F LOUIS TUCKER JR, , HOUSTON, TX, 77056 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826422	Brenda Guzman	, EUGENIA DAVANT WILSON, , SULPHUR, LA, 70664-1160 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826439	Brenda Guzman	, PAMELA GRAY BALDWIN, JPMORGAN CHASE BANK AGENT and AIF, FORT WORTH, TX, 76199-0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826446	Brenda Guzman	, SUSAN FRY BRACKEN, , TYLER, TX, 75701 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826453	Brenda Guzman	, MARSHA HENDERSON COLLINS, , HELENA, MT, 59602 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826460	Brenda Guzman	, ANNA REBECCA WARD DELKRUG, , HOUSTON, TX, 77062 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826477	Brenda Guzman	, DICK HOLLAND, , MIDLAND, TX, 79702-2926 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826484	Brenda Guzman	, CLAY JOHNSON, , MIDLAND, TX, 79701 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826491	Brenda Guzman	, MARY KATHRYN DUNNAM LADEWIG, , TROPHY CLUB, TX, 76262 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826507	Brenda Guzman	, KEVIN K LEONARD, , MIDLAND, TX, 79710 Code: Beaver Lodge Com 1M DHC	12/22/2023	

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2148969009997901831826514	Brenda Guzman	, CHRISTIAN MUELLER, , THE VILLAGES, FL, 32162 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826521	Brenda Guzman	, LOIS MUELLER, , BOLIVAR, MO, 65613 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826538	Brenda Guzman	, LILLY L NEWKIRK, , INDIANOLA, IA, 50125 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826545	Brenda Guzman	, PARADOX VALLEY PARTNERS LTD, , LLANO, TX, 78643 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826552	Brenda Guzman	, NANCY J SPENCER, , RANCHO CUCAMONGA, CA, 91739-2565 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826569	Brenda Guzman	, JANICE P CAMPBELL, AUSTEN S CAMPBELL POA, MIDLAND, TX, 79702-1714 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826576	Brenda Guzman	, RICHARD W MCDOUGAL, , JENKS, OK, 74037 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826583	Brenda Guzman	, ROBERT B MCDOUGAL JR, , THE VILLAGES, FL, 32163 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826590	Brenda Guzman	, L J and R R MONEY 1990 TR, DATED 10-9- 90, SACRAMENTO, CA, 95864 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826606	Brenda Guzman	, OAK TREE MINERALS LLC, , FRISCO, TX, 75034 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826613	Brenda Guzman	, MARY E PRIESTER, , BETTENDORF, IA, 52722 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826620	Brenda Guzman	, RAYBOURN ENTERPRISES LLC, , NEWTOWN SQUARE, PA, 19073 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826637	Brenda Guzman	, CATHARINE GRAY REMENICK, JPMORGAN CHASE BANK AGENT and A/I/F, FORT WORTH, TX, 76199-0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826644	Brenda Guzman	, WILLIAM R ARCHER JR 2003 GRANTOR, TRUST WILLIAM R ARCHER JR TRUSTEE, MCLEAN, VA, 22101 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826651	Brenda Guzman	, BARBARA A BRYANT 2003 GRANTOR TRUST, KATHERINE BRYAN LYNCH and, MCLEAN, VA, 22101 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826668	Brenda Guzman	, ROBIN T HENDERSON, , WESTERNPORT, MD, 21562 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826675	Brenda Guzman	, SHIRLEY JARAMILLO, , ALBUQUERQUE, NM, 87102 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826682	Brenda Guzman	, NORTHGATE ROYALTY FUND B LLC, , NOTRE DAME, IN, 46556-0757 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826699	Brenda Guzman	, IM H PORTER TUW, FBO JOHN PORTER, DAVENPORT, FL, 33837 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826705	Brenda Guzman	, RICHARD A GROENENDYKE JR, , TULSA, OK, 74114 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826712	Brenda Guzman	, SHERRI HULT HEINTSCHEL, , ROCKPORT, TX, 78382 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826729	Brenda Guzman	, GLENN HEINTSCHEL, , ROCKPORT, TX, 78382 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826736	Brenda Guzman	, MARY L HERROLD REVOC TR, DTD 1/7/92, TULSA, OK, 74133 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826743	Brenda Guzman	, ICON PETROLEUM INC, , MIDLAND, TX,	12/22/2023	

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92148969009997901831826750	Brenda Guzman	, HELEN MACALISTER, , BETTENDORF, IA, 52722 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826767	Brenda Guzman	, NINETY SIX CORPORATION, , MIDLAND, TX, 79701-4695 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826774	Brenda Guzman	, ENDURING RESOURCES IV, LLC, , CENTENNIAL, CO, 80111 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826781	Brenda Guzman	, JANE B SPENCER, , YUKON, OK, 73099 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826798	Brenda Guzman	, WATERS S DAVIS III BYPASS TRUST, C/O PDS/SSandC INNOVEST, FT WORTH, TX, 76102 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826804	Brenda Guzman	, RUGELEY TRUST, FRANK M RUGELEY CO- TTEE, BATON ROUGE, LA, 70816 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826811	Brenda Guzman	, JULIANNE DEAN, , SPRING, TX, 77393 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826828	Brenda Guzman	, ROBERT HENDERSON, , WESTERNPORT, MD, 21562 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826835	Brenda Guzman	, SIMCOE, LLC, , HOUSTON, TX, 77002-5632 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826842	Brenda Guzman	, BETTY ANN STEDMAN ESTATE, , HOUSTON, TX, 77001 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826859	Brenda Guzman	, ROY RANDOLPH REESE, , SUGAR LAND, TX, 77478 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826866	Brenda Guzman	, MWOODHAM LLC, , DENVER, CO, 80220 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826873	Brenda Guzman	, MARILYNN L JACKSON, , PONCA CITY, OK, 74604 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826880	Brenda Guzman	, MARBAR HOLDINGS LLC, , BELLAIRE, TX, 77401 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826897	Brenda Guzman	, MARY DAVANT FRICKE, , PORT LAVACA, TX, 77979 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826903	Brenda Guzman	, LISA F BERGER, , TULSA, OK, 74132 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826910	Brenda Guzman	, LAURA F GRUNDHOEFER, , SAN ANTONIO, TX, 78258 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826927	Brenda Guzman	, RDJL HOLDINGS LLC, , RICHMOND, TX, 77469 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826934	Brenda Guzman	, GEOJAC LLC, , HOUSTON, TX, 77079-6422 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826941	Brenda Guzman	, ANDREW MCDOUGAL, , OAK RIDGE, NC, 27310 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826958	Brenda Guzman	, CHARLES MCDOUGAL, , WAKE FOREST, NC, 27587 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending

.

## **APPLICATION FOR**

NEW MEXICO STATE LAND OFFICE

# **COMMINGLING AND OFF-LEASE STORAGE**

## **ON STATE TRUST LANDS**



This application form is required for all commingling applications requiring approval by the Commissioner of Public Lands.

Applicant:	Cherylene Weston	OGRID #:	
Well Name:	Beaver Lodge Com 1M	API #:	
Pool:	Basin Fruitland Coal, Blanco Mesaverde, Basin Dakota		
OPERATOR NA	ME:Hilcorp Energy Company		
OPERATOR AD	382 Road 3100, Aztec, NM 87410		

#### **APPLICATION REQUIREMENTS – SUBMIT:**

- 1. New Mexico Oil Conservation Division (NMOCD) application packet (or equivalent information if no application is required by NMOCD),
- 2. Commingling application fee of \$150.

CERTIFICATION: To the best of my knowledge,

- All business leases and rights-of-way necessary for conducting the proposed operation on State Trust lands have been applied for or obtained,
- The information submitted with this application is **accurate** and **complete**, and
- No loss will accrue to the state of New Mexico as a result of the proposed operation.

I also understand that **no action** will be taken on this application until the required information and fee are submitted to the State Land Office.

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

Cherylene Weston

Print or Type Name

# Cherylene Weston

Signature

1/10/2024

Date

713-289-2615

Phone Number

cweston@hilcorp.com

e-mail Address

**Submit application to:** Commissioner of Public Lands Attn: Commingling Manager PO Box 1148 Santa Fe, NM 87504-1148

Questions? Contact the Commingling Manager: 505.827.5791

Upon approval, the requesting organization will receive an acknowledgment letter from the Commissioner of Public Lands.

From:	McClure, Dean, EMNRD on behalf of Engineer, OCD, EMNRD
То:	<u>Cheryl Weston;</u> <u>Mandi Walker</u>
Cc:	McClure, Dean, EMNRD; Lowe, Leonard, EMNRD; Rikala, Ward, EMNRD; Wrinkle, Justin, EMNRD; Powell, Brandon, EMNRD; Lamkin, Baylen L.
Subject:	Approved Administrative Order DHC-5354
Date:	Wednesday, May 22, 2024 3:51:09 PM
Attachments:	DHC5354 Order.pdf

NMOCD has issued Administrative Order DHC-5354 which authorizes Hilcorp Energy Company (372171) to downhole commingle production within the following well:

Well Name:	Beaver Lodge Com #1M
Well API:	30-045-35552

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



## Stephanie Garcia Richard COMMISSIONER

## State of New Mexico Commissioner of Public Lands 310 OLD SANTA FE TRAIL P.O. BOX 1148

SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE Phone (505) 827-5760

Fax (505) 827-5766 www.nmstatelands.org

February 6, 2024

Hilcorp Energy Company ATTN: Ms. Cherylene Weston 382 Road 3100 Aztec, NM 87410

Re: Application for Downhole Commingling Wells approved for Downhole Commingling Beaver Lodge Com #001M (30-045-35552) POOLS: [71629] Basin; Fruitland Coal (Gas) [72319] Blanco-Mesaverde (Prorated Gas) [71599] Basin Dakota (Prorated Gas) San Juan County, New Mexico

Dear Ms. Weston,

We have received your \$150 application fee and request for downhole commingling for the abovecaptioned well(s).

Since it appears that all the rules and regulations for the New Mexico Oil Conservation Division and the State Land Office have been complied with and there will be no loss of revenue to the State of New Mexico as a result of your proposed operation, your request is hereby approved.

Our approval

- is subject to approval from all relevant agencies,
- does not constitute the granting of any right-of-way or construction rights not granted by the lease instrument.

If you have any questions or if we may be if further assistance, please contact Baylen Lamkin at 505.827.6628 or blamkin@slo.state.nm.us.

Respectfully,

5.6721/03

Stephanie Garcia Richard Commissioner of Public Lands

SGR/bl cc: OCD – Mr. Dean McClure OGMD and Units Reader Files Released to Imaging: 5/22/2024 4:03:35 PM



December 22, 2023

Mailed Certified / Electronic Return Receipt Requested

To: ALL INTEREST OWNERS

RE: Application to Downhole Commingle Production Well: Beaver Lodge Com 1M API: 30-045-35552 Section 32, Township 30 North, Range 08 West San Juan County, New Mexico

Ladies and Gentlemen:

Hilcorp Energy Company ("Hilcorp"), as Operator of the subject well, has filed application with the New Mexico Oil Conservation Division for approval to downhole commingle production from the **Fruitland Coal**, a formation Hilcorp soon intends to perforate, with existing production from the **Mesaverde and Dakota** formation. This letter and the application copy enclosed serve to provide you, an owner in one or more of the aforementioned formations, with written notice as prescribed by Subsection C of 19.15.12.11 New Mexico Administrative Code.

No action is required by you <u>unless</u> you wish to pursue a formal protest (see details italicized below).

If you no longer own an interest in this well or need to make changes to your address, etc., please email <u>ownerrelations@hilcorp.com</u>. For those without email access, please call (713) 209-2457.

Hilcorp is eager to explore this potential opportunity to enhance production. Thank you for your support.

Sincerely. Come Parters Phin

Carson Rice Landman – San Juan North (713) 757-7108 <u>carice@hilcorp.com</u>

cc:bmg Enclosures

#### Protesting:

Protests must be in writing and received with<u>in twenty (20) days from the date of this letter. In your</u> response, please include your contact information, details referenced herein and the specific concerns and/or reasoning behind your decision. You are encouraged to email me an electronic copy and, subsequently, mailing (overnight) a hard copy to my attention at the address in the footer below. Upon receipt, I will follow up by phone to discuss your concerns. Should we be unable to resolve them, a formal protest will be set for hearing with the New Mexico Oil & Conservation Division in Santa Fe, NM, wherein your attendance and testimony will be required.

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

#### Received by OCD: 1/26/2024 2:49:51 PM

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 Form C-107A Revised August 1, 2011

Page 37 of 53

**Oil Conservation Division** 1220 South St. Francis Dr. Santa Fe, New Mexico 87505 APPLICATION TYPE \_\_Single Well \_\_Establish Pre-Approved Pools EXISTING WELLBORE \_\_X\_Yes \_\_\_No

# APPLICATION FOR DOWNHOLE COMMINGLING

Hilcorp Energy Comp	bany	382 Road 3100, Azte	ec, NM 8/410		
Operator		Address			
Beaver Lodge Com	1M	I, 32, T30N, R08W		San Juan Count	y, NM
Lease	Well No.	Unit Letter-Section-Townshi	ip-Range	Count	у
OGRID No. 372171	_ Property Code <u>319133</u>	_ API No. <u>30-045-35552</u>	Lease Type:	Federal <u>X</u> Stat	eFee

DATA ELEMENT UPPER ZONE **INTERMEDIATE ZONE** LOWER ZONE **Basin Fruitland Coal** Blanco Mesaverde Basin Dakota Pool Name 71629 72319 71599 Pool Code 4110′ – 5546′ 2785' - 3116' 7420' - 7634' Top and Bottom of Pay Section (Perforated or Open-Hole Interval) Artificial Lift Artificial Lift Artificial Lift Method of Production (Flowing or Artificial Lift) Bottomhole Pressure (Note: Pressure data will not be required if the bottom 178 psi 639 psi 126 psi perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone) Oil Gravity or Gas BTU (Degree API or Gas BTU) 1121 BTU 1284 BTU 1057 BTU Producing, Shut-In or New Zone Producing Producing New Zone Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, Date: 9/1/2023 Date: 9/1/2023 Date: Oil: 0 bbls Oil: 0 bbls applicant shall be required to attach production Rates: Gas: 2,123 Mcf Rates: Gas: 2,394 Mcf estimates and supporting data.) Rates: Water: 18 bbls Water: 22 bbls Fixed Allocation Percentage Oil Gas Oil Gas Oil Gas than current or past production, supporting data or % % % % % % explanation will be required.)

# 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 Yes		NoX No	
Are all produced fluids from all commingled zones compatible with each other?	Yes	Χ	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	Х	No	
NMACD Defense Correlia to the smalle				

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 Cherylene Weston	TITLE_Operations/Regulatory Tech-Sr. DATE 12/12/2023	
TYPE OR PRINT NAME Cherylene Weston	TELEPHONE NO. (713) 289-2615	

E-MAIL ADDRESS \_\_\_\_\_ cweston@hilcorp.com



GANNETT

#### AFFIDAVIT OF PUBLICATION

Hilcorp Energy Hilcorp Energy 382 Rd 3100 Aztec NM 87410

#### STATE OF WISCONSIN, COUNTY OF BROWN

The Farmington Daily Times, a daily newspaper published in the city of Farmington, San Juan County, State of New Mexico, and personal knowledge of the facts herein state and that the notice hereto annexed was Published in said newspapers in the issue:

03/20/2024

and that the fees charged are legal. Sworn to and subscribed before on 03/20/2024 PO Box 631667 Cincinnati, OH 45263-1667

Notice by Hilcorp Energy Company for Downhole Commingling, San Juan County, New Mexico. Pursuant to Paragraph (2) of Subsection C of 19.15.12.11 NMAC, Hilcorp Energy Company, as Operator, has filed form C-107-A with the New Mexico Energy, Minerals and Natural Resources Department – Oil Conservation Division (NMOCD) seeking administrative approval to downhole commingle new production from the Basin-Fruitland Coal Gas Pool (71629) with existing production from the Blanco-Mesaverde Gas Pool (72319) and Basin-Dakota Gas Pool (71599) in the BEAVER LODGE COM 1M well (API No. 30-045-35552) located in Unit I, Section 32, Township 30 North, Range 8 West, NMPM, San Juan County, New Mexico. Commingling will not reduce the value of production. The allocation of production between zones will occur via subtraction method. This notice is intended for certain unlocatable interest owners in the aforementioned well for which certified mail delivery is not possible. Should you (the interest owner for which this notice is intended) have an objection, you must notify the NMOCD in writing within twenty (20) days from the date of this publication. Thereafter, the matter may be set for hearing with the NMOCD in Santa Fe, NM, wherein your attendance and testimony would be required. #9972629, Daily Times, March 20, 2024

Z	eegen l	Loran
Legal Clerk	-	
Notary, State of WI	County of Brown	
	0-25-2	F
My commission exp	bires	1
Publication Cost:	\$84.50	
Order No:	9972629	# of Copies:
Customer No:	1366050	1

PO #: THIS IS NOT AN INVOICE!

Please do not use this form for payment remittance.

RYAN SPELLER Notary Public State of Wisconsin

Certified Number	Sender	Recipient	Date Mailed	Delivery Status
92148969009997901831825807	Brenda Guzman	, LINDSAY PRODUCTION, and ROYALTIES LTD, FREDERICKSBURG, TX, 78624 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825814	Brenda Guzman	, THE NORDAN TRUST, RANDOLPH C MARCEAU TRUSTEE, SAN ANTONIO, TX, 78209 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825821	Brenda Guzman	, PRIMITIVE PETROLEUM INC, , MIDLAND, TX, 79707 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825838	Brenda Guzman	, WESLEY WEST MINERALS LTD, , HOUSTON, TX, 77001 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825845	Brenda Guzman	, KENNEDY MINERALS LTD, , MIDLAND, TX, 79701 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825852	Brenda Guzman	, MARGARET A KEARNS TRUST FBO, HELENE D GORMAN AND AS TRUSTEE, NAPLES, FL, 34102 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825869	Brenda Guzman	, MARGARET A KEARNS TRUST FBO, JAMES B DRAPER TRUSTEE, COLORADO SPRINGS, CO, 80904-1029 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825876	Brenda Guzman	, CYNTHIA GRAY MILANI ESTATE, BARBARA B GRAY INDEP EXECUTRIX, FT WORTH, TX, 76199-0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825883	Brenda Guzman	, STATE OF NEW MEXICO, BATAAN MEMORIAL BUILDING, SANTA FE, NM, 87501 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825890	Brenda Guzman	, ELLEN BOONE SCHWETHELM, , SAN ANTONIO, TX, 78209-6716 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825906	Brenda Guzman	, CLAUD W RAYBOURN, , APPLE VALLEY, CA, 92307 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825913	Brenda Guzman	, ELSR LP, C/O PETROLEDGER FINANCIAL SERV, FORT WORTH, TX, 76107 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825920	Brenda Guzman	, GROVER FAMILY LP, , MIDLAND, TX, 79702- 3666 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825937	Brenda Guzman	, ARCHER PEARL ENERGY LTD, , SAN ANTONIO, TX, 78209 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825944	Brenda Guzman	, CHARLES RUSSELL BELL JR, , BELLVILLE, TX, 77418-0042 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825951	Brenda Guzman	, VALERIE L JONES HUNDLEY, , CORPUS CHRISTI, TX, 78468-1242 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825968	Brenda Guzman	, JOHN HUNTER JONES, , AUSTIN, TX, 78746 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825975	Brenda Guzman	, JESSICA DAVANT STANLEY, , AUSTIN, TX, 78732 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825982	Brenda Guzman	, AMELIA ANNE SUNDBERG, , RICHMOND, TX, 77406-6727 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831825999	Brenda Guzman	, HDBC INVESTMENTS LTD, A TEXAS LTD PTRSHP, DALLAS, TX, 75225 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826002	Brenda Guzman	, PAUL DAVIS LTD, , MIDLAND, TX, 79702 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826019	Brenda Guzman	, MULLIGAN LP, , RICHARDSON, TX, 75080- 4611 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826026	Brenda Guzman	, REBECCA ANN HOWARD MUNNELL, , SUGAR LAND, TX, 77479-1470	12/22/2023	

ized.p.y.9CA; 1/26/2024 2:		aser Substrates, Inc. – USPS Electronic Return F Code: Beaver Lodge Com 1M DHC		Signature Pending
02148969009997901831826033	Brenda Guzman	, RICHARD HOWARD, , HOUSTON, TX, 77024 Code: Beaver Lodge Com 1M DHC	12/22/2023	
02148969009997901831826040	Brenda Guzman	, ROBERT LOUIS HOWARD JR, , CLARKESVILLE, GA, 30523 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending Signature Pending
02148969009997901831826057	Brenda Guzman	, CROSS TIMBERS ENERGY LLC, C/O DRILLINGINFO MAIL, FORT WORTH, TX, 76102 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826064	Brenda Guzman	, WILLIAM C EILAND, , MIDLAND, TX, 79702 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826071	Brenda Guzman	, DELACOSTA ENERGY LP, ANTHONY SPEIER REGISTER AGENT, SAN ANTONIO, TX, 78212 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826088	Brenda Guzman	, PNH RESOURCES LLC, PHILIP N HUDSON MANAGER, SAN ANTONIO, TX, 78280 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826095	Brenda Guzman	, FRED ELDON SPENCER, and JANE B SPENCER JTWROS, MUSTANG, OK, 73064 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826101	Brenda Guzman	, JAMES R LEETON JR, , MIDLAND, TX, 79702 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826118	Brenda Guzman	, ROBERT UMBACH CANCER FOUNDATION, MARTINDALE CONSULTANTS INC AGENT, OKLAHOMA CITY, OK, 73112-2311 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826125	Brenda Guzman	, MARTHA M TUCKER, , HOUSTON, TX, 77252-2822 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826132	Brenda Guzman	, THOMPSON FAMILY LLC, , SANTA FE, NM, 87501 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826149	Brenda Guzman	, VIRGINIA THOMPSON CREPS REV TRUST, ELIZABETH R HARNED SUCC TRUSTEE, WEST CHESTER, PA, 19380 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826156	Brenda Guzman	, ATKO PARTNERS LTD, , HUNTSVILLE, TX, 77340 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826163	Brenda Guzman	, DAVID H GRAY, JPMORGAN CHASE BANK AGENT and AIF, FORT WORTH, TX, 76199- 0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826170	Brenda Guzman	, JOHN L GRAY, JPMORGAN CHASE BANK AGENT and AIF, FORT WORTH, TX, 76199- 0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826187	Brenda Guzman	, LAURA A GUNN, , SAN ANTONIO, TX, 78216-2227 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826194	Brenda Guzman	, SHARON A LONG, , BARTLESVILLE, OK, 74006 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826200	Brenda Guzman	, GUY DAVID WARD, , SPRING HILL, TN, 37174 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826217	Brenda Guzman	, TIMOTHY WINSTON WARD, , CARROLLTON, TX, 75007 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826224	Brenda Guzman	, JAMES WENDELL WEST, , LOS ANGELES, CA, 90049-8382 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826231	Brenda Guzman	, HELEN BLOXSOM DAVIS, , HOUSTON, TX, 77025 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826248	Brenda Guzman	, CORNELIA DAVANT PERRY, JAMES E DAVANT POA, BLESSING, TX, 77419-0206 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826255	Brenda Guzman	, DAVID ELBERT REESE, , RICHMOND, TX, 77469 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending

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92148969009997901831826262	Brenda Guzman	, WILLIAM SHUPP, , MURFREESBORO, TN, 37128 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826279	Brenda Guzman	, JAMES SHUPP, , SHREWSBURY, PA, 17361 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826286	Brenda Guzman	, ANGELA SLAIS, , GARDNERVILLE, NV, 86460 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826293	Brenda Guzman	, JEAN ASHLEY WARD CARTER, , HOUSTON, TX, 77062 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826309	Brenda Guzman	, SANDRA T CURRIE, , LLANO, TX, 78643 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826316	Brenda Guzman	, WILLIAM LOUIS DAVANT, , BLESSING, TX, 77419 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826323	Brenda Guzman	, JAMES E DAVANT DVM, , BLESSING, TX, 77419-0695 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826330	Brenda Guzman	, KATHRYN DAVANT DODSON, , CLARKSDALE, MS, 38614 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826347	Brenda Guzman	, THOMAS E DUNNAM III, , SAN ANTONIO, TX, 78269 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826354	Brenda Guzman	, JAMES H ESSMAN, , MIDLAND, TX, 79702 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826361	Brenda Guzman	, WILLIAM F GORDON, , LE CLAIRE, IA, 52753 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826378	Brenda Guzman	, JULIE A GRAHAM, , NORTH PORT, FL, 34291 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826385	Brenda Guzman	, ADAIR M HADLEY, , SUNSET BEACH, NC, 28468 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826392	Brenda Guzman	, THEODORE W SCHICK JR, and MARCELLA MOYER SCHICK, ALLENTOWN, PA, 18104 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826408	Brenda Guzman	, BRADFORD TUCKER, , HOUSTON, TX, 77056-1421 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826415	Brenda Guzman	, F LOUIS TUCKER JR, , HOUSTON, TX, 77056 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826422	Brenda Guzman	, EUGENIA DAVANT WILSON, , SULPHUR, LA, 70664-1160 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826439	Brenda Guzman	, PAMELA GRAY BALDWIN, JPMORGAN CHASE BANK AGENT and AIF, FORT WORTH, TX, 76199-0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826446	Brenda Guzman	, SUSAN FRY BRACKEN, , TYLER, TX, 75701 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826453	Brenda Guzman	, MARSHA HENDERSON COLLINS, , HELENA, MT, 59602 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826460	Brenda Guzman	, ANNA REBECCA WARD DELKRUG, , HOUSTON, TX, 77062 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826477	Brenda Guzman	, DICK HOLLAND, , MIDLAND, TX, 79702-2926 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826484	Brenda Guzman	, CLAY JOHNSON, , MIDLAND, TX, 79701 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826491	Brenda Guzman	, MARY KATHRYN DUNNAM LADEWIG, , TROPHY CLUB, TX, 76262 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826507	Brenda Guzman	, KEVIN K LEONARD, , MIDLAND, TX, 79710 Code: Beaver Lodge Com 1M DHC	12/22/2023	

				Signature Pending
02148969009997901831826514	Brenda Guzman	, CHRISTIAN MUELLER, , THE VILLAGES, FL, 32162 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826521	Brenda Guzman	, LOIS MUELLER, , BOLIVAR, MO, 65613 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826538	Brenda Guzman	, LILLY L NEWKIRK, , INDIANOLA, IA, 50125 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826545	Brenda Guzman	, PARADOX VALLEY PARTNERS LTD, , LLANO, TX, 78643 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826552	Brenda Guzman	, NANCY J SPENCER, , RANCHO CUCAMONGA, CA, 91739-2565 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826569	Brenda Guzman	, JANICE P CAMPBELL, AUSTEN S CAMPBELL POA, MIDLAND, TX, 79702-1714 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826576	Brenda Guzman	, RICHARD W MCDOUGAL, , JENKS, OK, 74037 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826583	Brenda Guzman	, ROBERT B MCDOUGAL JR, , THE VILLAGES, FL, 32163 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826590	Brenda Guzman	, L J and R R MONEY 1990 TR, DATED 10-9- 90, SACRAMENTO, CA, 95864 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826606	Brenda Guzman	, OAK TREE MINERALS LLC, , FRISCO, TX, 75034 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826613	Brenda Guzman	, MARY E PRIESTER, , BETTENDORF, IA, 52722 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826620	Brenda Guzman	, RAYBOURN ENTERPRISES LLC, , NEWTOWN SQUARE, PA, 19073 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826637	Brenda Guzman	, CATHARINE GRAY REMENICK, JPMORGAN CHASE BANK AGENT and A/I/F, FORT WORTH, TX, 76199-0084 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826644	Brenda Guzman	, WILLIAM R ARCHER JR 2003 GRANTOR, TRUST WILLIAM R ARCHER JR TRUSTEE, MCLEAN, VA, 22101 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826651	Brenda Guzman	, BARBARA A BRYANT 2003 GRANTOR TRUST, KATHERINE BRYAN LYNCH and, MCLEAN, VA, 22101 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826668	Brenda Guzman	, ROBIN T HENDERSON, , WESTERNPORT, MD, 21562 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826675	Brenda Guzman	, SHIRLEY JARAMILLO, , ALBUQUERQUE, NM, 87102 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826682	Brenda Guzman	, NORTHGATE ROYALTY FUND B LLC, , NOTRE DAME, IN, 46556-0757 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826699	Brenda Guzman	, IM H PORTER TUW, FBO JOHN PORTER, DAVENPORT, FL, 33837 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826705	Brenda Guzman	, RICHARD A GROENENDYKE JR, , TULSA, OK, 74114 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826712	Brenda Guzman	, SHERRI HULT HEINTSCHEL, , ROCKPORT, TX, 78382 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826729	Brenda Guzman	, GLENN HEINTSCHEL, , ROCKPORT, TX, 78382 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826736	Brenda Guzman	, MARY L HERROLD REVOC TR, DTD 1/7/92, TULSA, OK, 74133 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
2148969009997901831826743	Brenda Guzman	, ICON PETROLEUM INC, , MIDLAND, TX, 79701	12/22/2023	

				Signature Pending
92148969009997901831826750	Brenda Guzman	, HELEN MACALISTER, , BETTENDORF, IA, 52722 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826767	Brenda Guzman	, NINETY SIX CORPORATION, , MIDLAND, TX, 79701-4695 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826774	Brenda Guzman	, ENDURING RESOURCES IV, LLC, , CENTENNIAL, CO, 80111 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826781	Brenda Guzman	, JANE B SPENCER, , YUKON, OK, 73099 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826798	Brenda Guzman	, WATERS S DAVIS III BYPASS TRUST, C/O PDS/SSandC INNOVEST, FT WORTH, TX, 76102 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
02148969009997901831826804	Brenda Guzman	, RUGELEY TRUST, FRANK M RUGELEY CO- TTEE, BATON ROUGE, LA, 70816 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826811	Brenda Guzman	, JULIANNE DEAN, , SPRING, TX, 77393 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826828	Brenda Guzman	, ROBERT HENDERSON, , WESTERNPORT, MD, 21562 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826835	Brenda Guzman	, SIMCOE, LLC, , HOUSTON, TX, 77002-5632 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826842	Brenda Guzman	, BETTY ANN STEDMAN ESTATE, , HOUSTON, TX, 77001 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826859	Brenda Guzman	, ROY RANDOLPH REESE, , SUGAR LAND, TX, 77478 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826866	Brenda Guzman	, MWOODHAM LLC, , DENVER, CO, 80220 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826873	Brenda Guzman	, MARILYNN L JACKSON, , PONCA CITY, OK, 74604 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826880	Brenda Guzman	, MARBAR HOLDINGS LLC, , BELLAIRE, TX, 77401 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826897	Brenda Guzman	, MARY DAVANT FRICKE, , PORT LAVACA, TX, 77979 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826903	Brenda Guzman	, LISA F BERGER, , TULSA, OK, 74132 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826910	Brenda Guzman	, LAURA F GRUNDHOEFER, , SAN ANTONIO, TX, 78258 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826927	Brenda Guzman	, RDJL HOLDINGS LLC, , RICHMOND, TX, 77469 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826934	Brenda Guzman	, GEOJAC LLC, , HOUSTON, TX, 77079-6422 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826941	Brenda Guzman	, ANDREW MCDOUGAL, , OAK RIDGE, NC, 27310 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending
92148969009997901831826958	Brenda Guzman	, CHARLES MCDOUGAL, , WAKE FOREST, NC, 27587 Code: Beaver Lodge Com 1M DHC	12/22/2023	Signature Pending

.

 From:
 Cheryl Weston

 To:
 McClure, Dean, EMNRD

 Subject:
 FW: [EXTERNAL] Action ID: 308500; DHC-5354

 Date:
 Friday, April 19, 2024 11:06:44 AM

 Attachments:
 image001.png

Dean,

Per, Reservoir Engineer, Griff Selby, we believe the original allocated volumes for the existing zones is correct and accurate. We are not proposing a new allocation for the existing zones. Let me know if I can help clarify anything further.

Thanks, Cheryl

From: Cheryl Weston <<u>cweston@hilcorp.com</u>>
Sent: Thursday, April 18, 2024 2:56 PM
To: Griffin Selby <<u>Griffin.Selby@hilcorp.com</u>>; Sikandar Khan <<u>Sikandar.Khan@hilcorp.com</u>>
Subject: FW: [EXTERNAL] Action ID: 308500; DHC-5354

Griffin,

Please see Dean's request below for the Beaver Lodge Com 1M DHC.

Cheryl

From: McClure, Dean, EMNRD <<u>Dean.McClure@emnrd.nm.gov</u>>
Sent: Thursday, April 18, 2024 2:23 PM
To: Cheryl Weston <<u>cweston@hilcorp.com</u>>
Cc: Mandi Walker <<u>mwalker@hilcorp.com</u>>
Subject: RE: [EXTERNAL] Action ID: 308500; DHC-5354

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Cheryl,

I looked at the application again and see that the GOR is coming from the Gartner A #15 which I had missed the first time. As such we should be fine regarding the GOR.

However, with the recalculation of remaining reserves for the MV formation, it seems that perhaps Hilcorp is proposing a new allocation. If so, please provide additional information regarding using a calculation to 1 MCF per day rather than the econ limit.

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

From: Cheryl Weston <<u>cweston@hilcorp.com</u>>
Sent: Wednesday, March 20, 2024 7:00 AM
To: McClure, Dean, EMNRD <<u>Dean.McClure@emnrd.nm.gov</u>>
Cc: Mandi Walker <<u>mwalker@hilcorp.com</u>>
Subject: FW: [EXTERNAL] Action ID: 308500; DHC-5354

Dean,

Please see our Reservoir Engineer's comment below regarding your question on the GOR. Will this work for the DHC?

Regarding the DHC notice to interest owners, it will be published today on 3/20/24.

Thanks, Cheryl

From: Griffin Selby <<u>Griffin.Selby@hilcorp.com</u>>
Sent: Monday, March 18, 2024 4:31 PM
To: Cheryl Weston <<u>cweston@hilcorp.com</u>>; Sikandar Khan <<u>Sikandar.Khan@hilcorp.com</u>>
Cc: Mandi Walker <<u>mwalker@hilcorp.com</u>>
Subject: RE: [EXTERNAL] Action ID: 308500; DHC-5354

I used the existing forecasts from each zone as allocated paired with the oil yield maps we have. Those yield values were taken from standalone offset wells for each formation then gridded in PETRA. I changed the forecast to run out to 1 mcfd for each formation instead of the economic limit, talking with Mandi that more closely lines up with the allocated volumes for the base formation – that gives the following values. That is the only thing we can change and I think nullifies any errors based on economic life for the existing DK and MV....as far as Deans question goes with the yields though, these should are derived from standalone offsets so we feel good about the values there.

Let me know if we need to discuss further.

New allocations with MV and DK remaining reserves ran out to 1 mcfd

Formation	Yield (bbl/MM)	Remaining Reserves	% Oil
MV	1.83	679	67%
FRC	0.61	777	25%
DK	0.18	806	8%
			100%

From: Cheryl Weston <cweston@hilcorp.com>
Sent: Monday, March 18, 2024 8:16 AM
To: Sikandar Khan <<u>Sikandar.Khan@hilcorp.com</u>>; Griffin Selby <<u>Griffin.Selby@hilcorp.com</u>>
Subject: FW: [EXTERNAL] Action ID: 308500; DHC-5354

Griffin,

Please see Dean's note below regarding the Oil allocation. Please provide an update or explanation.

Thanks, Cheryl

From: McClure, Dean, EMNRD <<u>Dean.McClure@emnrd.nm.gov</u>>
Sent: Friday, March 15, 2024 4:54 PM
To: Cheryl Weston <<u>cweston@hilcorp.com</u>>; Mandi Walker <<u>mwalker@hilcorp.com</u>>
Subject: [EXTERNAL] Action ID: 308500; DHC-5354

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To whom it may concern (c/o Cheryl Weston for Hilcorp Energy Company),

Action ID	308500
Admin No.	DHC-5354
Applicant	Hilcorp Energy Company (372171)
Title	BEAVER LODGE COM #001M
Sub. Date	1/26/2024

The Division is reviewing the following application:

Please provide the following additional supplemental documents:

•

Please provide additional information regarding the following:

- Was public notice provided of this application? If so, please provide the affidavit of publication.
- Please provide more explanation regarding the allocation of oil, specifically regarding where the GOR for the FLC was derived.
- Please provide the address to which notice was provided of this application to the SLO and the certified tracking number associated with it.

#### Additional notes:

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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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While all reasonable care has been taken to avoid the transmission of viruses, it is the responsibility of the recipient to ensure that the onward transmission, opening, or use of this message and any attachments will not adversely affect its systems or data. No responsibility is accepted by the company in this regard and the recipient should carry out such virus and other checks as it considers appropriate.

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

# APPLICATION FOR DOWNHOLE COMMINGLINGSUBMITTED BY HILCORP ENERGY COMPANYORDER NO. DHC-5354

# <u>ORDER</u>

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 shutin 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 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.
- 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

Order No. DHC-5354

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. 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.
- 13. By granting the Application with the conditions specified below, this Order prevents waste and protects correlative rights, public health, and the environment.

### <u>ORDER</u>

- 1. Applicant is authorized to downhole commingle the Pools described in Exhibit A within the well bore of the well identified in Exhibit A.
- 2. This Order supersedes Order DHC-3897.
- 3. Applicant shall allocate a fixed percentage of the oil production from the Well to each of the Pools until a different plan to allocate oil production is approved by OCD. Of the oil production from the Well:
  - a. fifty-one percent (51%) shall be allocated to the BASIN FRUITLAND COAL (GAS) pool (pool ID: 71629);
  - b. forty-three percent (43%) shall be allocated to the BLANCO-MESAVERDE (PRORATED GAS) pool (pool ID: 72319); and
  - c. six percent (6%) shall be allocated to the BASIN DAKOTA (PRORATED GAS) pool (pool ID: 71599).

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

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

The current pool(s) are:

- a. the BLANCO-MESAVERDE (PRORATED GAS) pool (pool ID: 72319); and
- b. the BASIN DAKOTA (PRORATED GAS) pool (pool ID: 71599).

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

- a. forty-seven percent (47%) shall be allocated to the BLANCO-MESAVERDE (PRORATED GAS) pool (pool ID: 72319); and
- b. fifty-three percent (53%) shall be allocated to the BASIN DAKOTA (PRORATED GAS) pool (pool ID: 71599).

Applicant shall calculate the oil and gas production average during the fourth year after the commencement of commingling, which shall be used to establish a fixed percentage of the total oil and gas production that shall be allocated to each of the Pools ("fixed percentage

allocation plan"). No later than ninety (90) days after the fourth year, Applicant shall submit a Form C-103 to the OCD Engineering Bureau that includes the fixed percentage allocation plan and all data used to determine it. If Applicant fails to do so, this Order shall terminate on the following day. If OCD denies the fixed percentage allocation plan, this Order shall terminate on the date of such action. If OCD approves the percentage allocation plan with or without modifications, then the approved percentage allocation plan shall be used to determine oil and gas allocation starting on the date of such action until the Well is plugged and abandoned.

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

Order No. DHC-5354

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

DYLAN M. FUGE DIRECTOR (ACTING) DATE: 5/22/24

Order No. DHC-5354

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En	ergy, Minerals and Natural Resour	ces Department	
	Exhibit A		
	Order: DHC-5354		
	<b>Operator: Hilcorp Energy Co</b>	mpany (372171)	
	Well Name: Beaver Lodge Con	n #1M	
	Well API: 30-045-35552		
	Pool Name: BASIN FRUITLAND	COAL (GAS)	
Linnar Zana	Pool ID: 71629	Current:	New: X
Upper Zone	Allocation: Subtraction	Oil: 51.0%	Gas: subt
	Interval: Perforations	Top: 2,785	Bottom: 3,116
	Pool Name: BLANCO-MESAVE	RDE (PRORATED GAS)	
Intermediate Zone	Pool ID: 72319	Current: X	New:
intermediate zone	Allocation: Fixed Percent	Oil: 43.0%	Gas: 47.0%
	Interval: Perforations	Top: 4,110	Bottom: 5,546
Bottom of Inter	val within 150% of Upper Zone's To	op of Interval:	
	Pool Name: BASIN DAKOTA (P	RORATED GAS)	
Lower Zono	Pool ID: 71599	Current: X	New:
Lower Zone	Allocation: Fixed Percent	Oil: 6.0%	Gas: 53.0%
	Interval: Perforations	Top: 7,420	Bottom: 7,634
Bottom of Inter	val within 150% of Upper Zone's To	op 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

CONDITIONS

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

Operator:	OGRID:
HILCORP ENERGY COMPANY	372171
1111 Travis Street	Action Number:
Houston, TX 77002	308500
	Action Type:
	[C-107] Down Hole Commingle (C-107A)

CONDITION OF THE OWNER OF		
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.	5/22/2024

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Action 308500