

Initial Application Part I

Received: 08/30/2019

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

RECEIVED: 08/30/2019	REVIEWER: MAM	TYPE: DHC	APP NO: pMAM1924244525
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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

**ADMINISTRATIVE APPLICATION CHECKLIST**

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

Applicant: Hilcorp Energy CompanyOGRID Number: 372171Well Name: Cain #10EAPI: 30-045-24109Pool: Blanco MesaverdePool Code: 72319

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

DHC-50591) **TYPE OF APPLICATION:** Check those which apply for [A]

A. Location - Spacing Unit - Simultaneous Dedication

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

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

[I] Commingling - Storage - Measurement

☒ DHC☐ CTB☐ PLC☐ PC☐ OLS☐ OLM

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

☐ WFX☐ PMX☐ SWD☐ IPI☐ EOR☐ PPR2) **NOTIFICATION REQUIRED TO:** Check those which apply.A. ☐ Offset operators or lease holdersB. ☐ Royalty, overriding royalty owners, revenue ownersC. ☐ Application requires published noticeD. ☐ Notification and/or concurrent approval by SLOE. ☒ Notification and/or concurrent approval by BLMF. ☐ Surface ownerG. ☐ For all of the above, proof of notification or publication is attached, and/or,H. ☒ No notice required**FOR OCD ONLY**☐

Notice Complete

☐Application
Content
Complete

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

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

Cherylene Weston, Operations/Regulatory Tech-Sr.

Print or Type Name

Signature

Date

8-30-19505-564-0779

Phone Number

cwesto@hilcorp.com

e-mail Address

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division



Receipt of Fee Application Payment

PO Number: AUNHO-190830-C-107A

Payment Date: 8/30/2019 12:08:53 PM

Payment Amount: \$150.00

Payment Type: Credit Card

Application Type: Application for administrative approval of a downhole commingle.

Fee Amount: \$150.00

Application Status: Under OCD Review

OGRID: 372171

First Name: Cheryl

Last Name: Weston

Email: cweston@hilcorp.com

IMPORTANT: If you are mailing or delivering your application, you must print and include your receipt of payment as the first page on your application. All mailed and delivered applications must be sent to the following address: 1220 S. St. Francis Dr., Santa Fe, NM 87505. For inquiries, reference the PO Number listed above.

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

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

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

APPLICATION FOR DOWNHOLE COMMINGLING

Hilcorp Energy Company 382 Road 3100, Aztec, NM 87410
Operator Address
Cain #10E Unit F (SENW) Section 15, T28N, R10W San Juan
Lease Well No. Unit Letter-Section-Township-Range County
OGRID No. 372171 Property Code 318468 API No. 30-045-24109 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Otero-Chacra	Blanco-Mesaverde	Basin-Dakota
Pool Code	78840	72319	71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2572' - 3132'	3562' - 4800' Est.	6387' - 6545'
Method of Production (Flowing or Artificial Lift)	FLOWING	NEW ZONE	FLOWING
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)	830 psi	1,332 psi	1,270 psi
COil Gravity or Gas BTU (Degree API or Gas BTU)	1,180 BTU	1,325 BTU	1,200 BTU
Producing, Shut-In or New Zone	Producing	New Zone	Producing
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: 06/01/2019 Rates: 0 BBL Oil 2028 MCF Gas 0 BBL Water	Date: N/A Rates: N/A	Date: 06/01/2019 Rates: 0 BBL Oil 225 MCF Gas 1 BBL Water
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 Will be supplied upon completion % %	Oil Gas Will be supplied upon completion % %	Oil Gas Will be supplied upon completion % %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes ☒ No ☐
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes ☐ No ☐
Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐
Will commingling decrease the value of production? Yes ☐ No ☒
If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands
or the United States Bureau of Land Management been notified in writing of this application? Yes ☒ No ☐
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 Technician-Sr. DATE 8-30-19
TYPE OR PRINT NAME Cherylene Weston TELEPHONE NO. (505) 564-0779
E-MAIL ADDRESS cweston@hilcorp.com

District I

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

District II

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

District III

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

District IV

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

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

Form C-102
August 1, 2011

Permit 271342

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-045-24109	2. Pool Code 72319	3. Pool Name BLANCO-MESAVERDE (PRORATED GAS)
4. Property Code 318468	5. Property Name CAIN	6. Well No. 010E
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 5878

10. Surface Location

UL - Lot F	Section 15	Township 28N	Range 10W	Lot Idn	Feet From 1665	N/S Line N	Feet From 1820	E/W Line W	County SAN JUAN
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11. Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
12. Dedicated Acres 320.00 - W/2			13. Joint or Infill		14. Consolidation Code		15. Order No.		

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

	<p style="text-align: center;">OPERATOR CERTIFICATION</p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>E-Signed By: <i>Cherylene Weston</i> Title: Cherylene Weston, Operations/Regulatory Tech-Sr. Date: 08/19/2019</p>
	<p style="text-align: center;">SURVEYOR CERTIFICATION</p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>Surveyed By: FRED B KERR, JR. Date of Survey: 10/29/1979 Certificate Number: 3950</p>

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

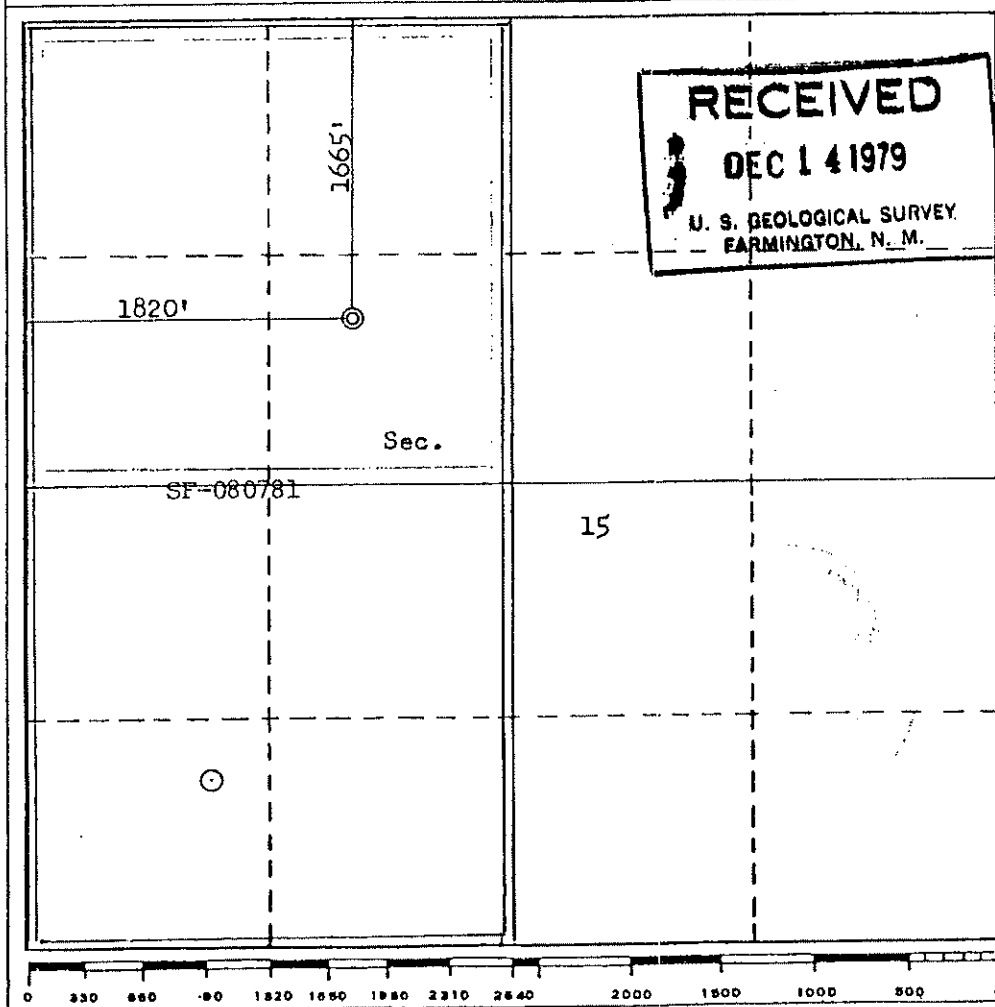
Operator SOUTHLAND ROYALTY COMPANY			Lease CAIN		Well No. 10-E
Unit Letter F	Section 15	Township 28N	Range 10W	County San Juan	
Actual Footage Location of Well: 1665 feet from the North line and 1820 feet from the West line					
Ground Level Elev. 5878	Producing Formation Dakota / Chacra		Pool Basin/ Undesignated W. C.	Dedicated Acreage: 320 / 160 Acres	

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

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

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

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



CERTIFICATION

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

Name
Curtis C. Parsons
Position
District Engineer
Company
Southland Royalty Company
Date
December 4, 1979

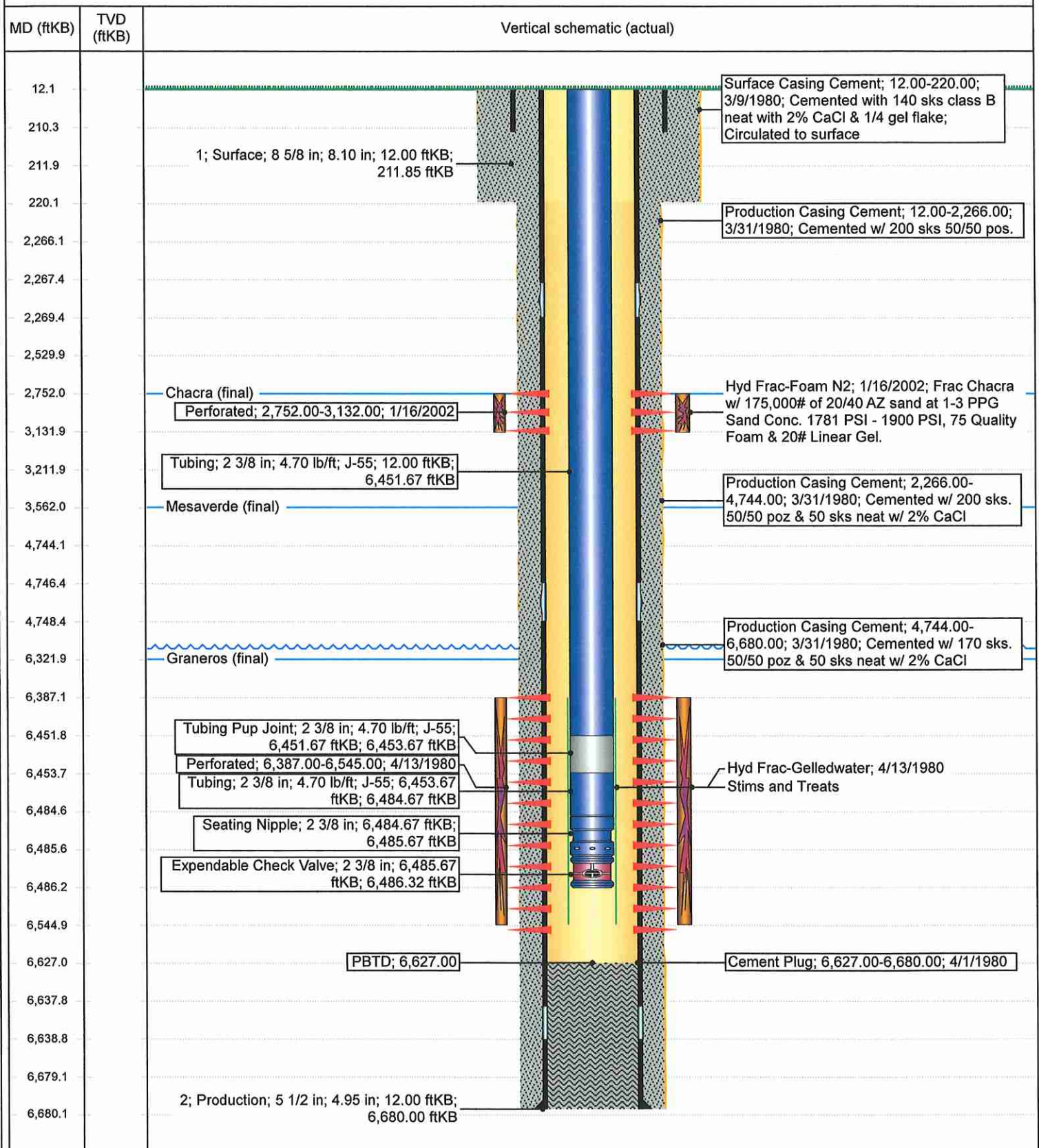
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
October 28, 1979
Registered Professional Engineer and/or Land Surveyor
Fred B. Kerro Jr.
Certificate No.
3950
B. AERR, JR.

Well Name: CAIN #10E

API / UWI 3004524109	Surface Legal Location 015-028N-010W-F	Field Name OTERO (CHACRA) GAS	Route 0707	State/Province NEW MEXICO	Well Configuration Type
Ground Elevation (ft) 5,878.00	Original KB/RT Elevation (ft) 5,890.00	KB-Ground Distance (ft) 12.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

Original Hole, 8/30/2019 11:39:35 AM

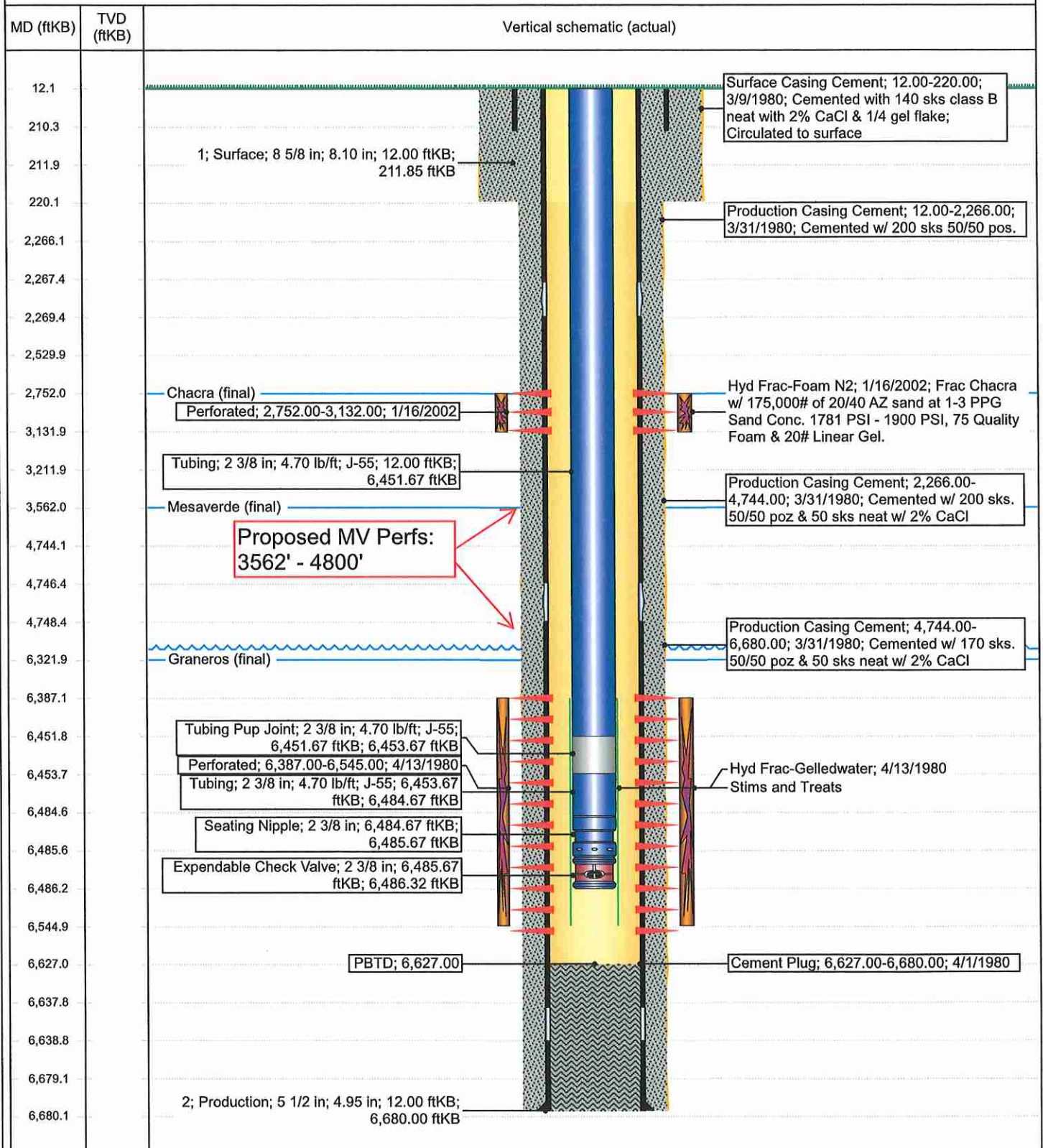


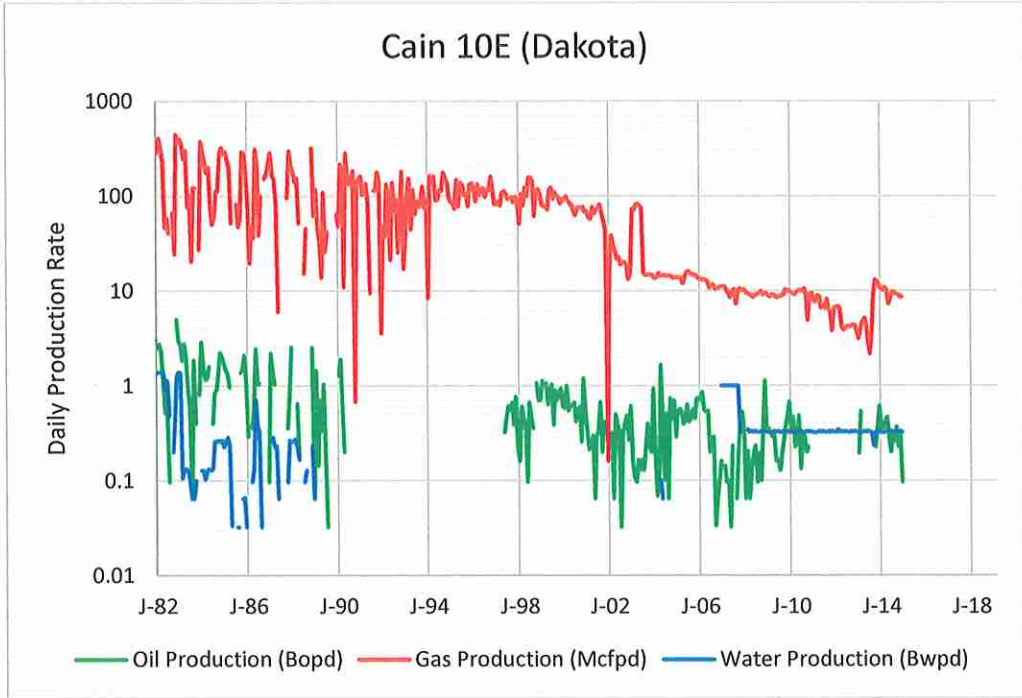
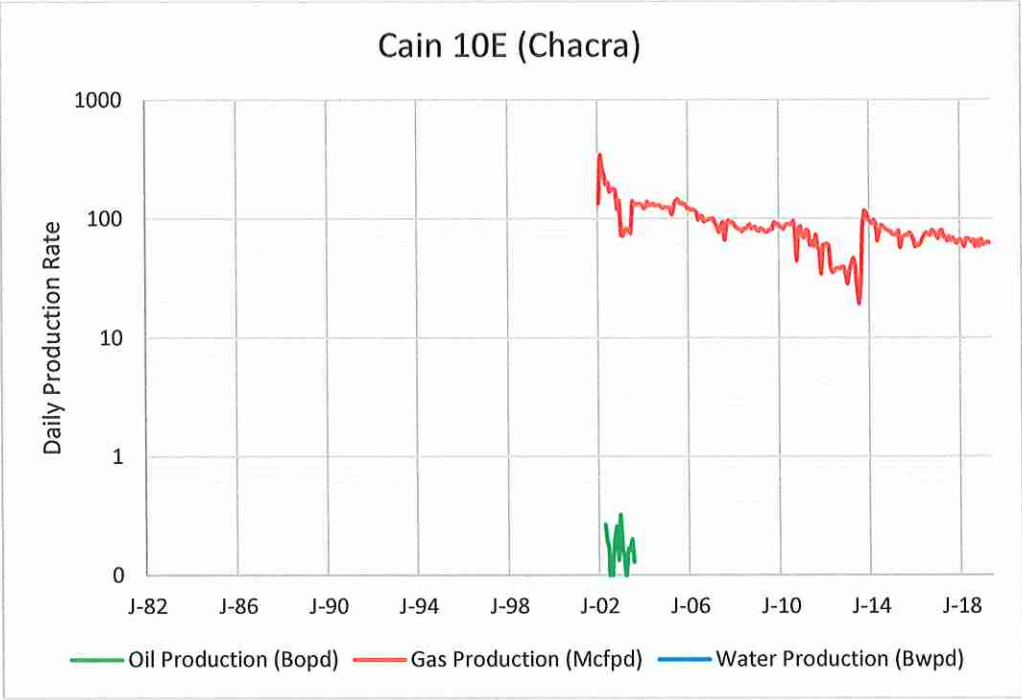
Proposed Schematic

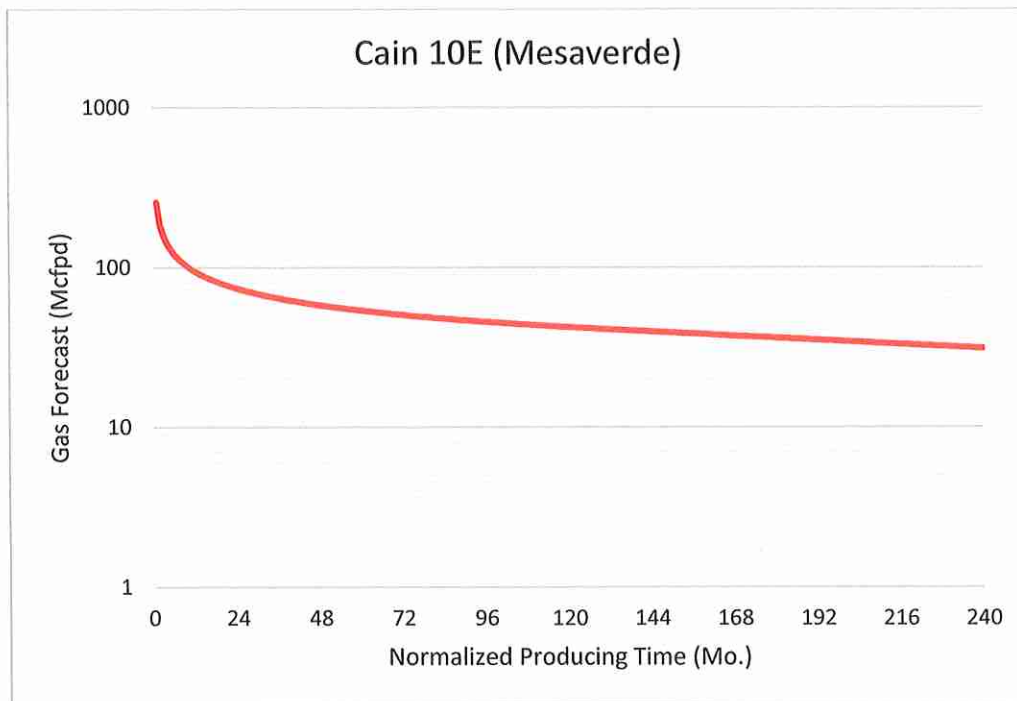
Well Name: CAIN #10E

API / UWI 3004524109	Surface Legal Location 015-028N-010W-F	Field Name OTERO (CHACRA) GAS	Route 0707	State/Province NEW MEXICO	Well Configuration Type
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Original Hole, 8/30/2019 11:22:49 AM







The forecast for Mesaverde production has been generated using a type curve of MV gas production in the surrounding production 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 basinwide Moving-Domain Material Balance models that have proven to approximate the pressure in the given reservoirs well in this portion of the basin. These models were constructed incorporating reservoir dynamics and physics, historic production, and observed pressure data. Historic commingling operations have proven reservoir fluids are compatible and the higher MV reservoir pressure declines very quickly given the tight gas nature of the horizon.

Cain 10E – Production Allocation Method

Production for the downhole commingle will be allocated using the subtraction method in agreement with local agencies. The base formations are the Chacra and Dakota and the added formation to be commingled is the Mesaverde. The subtraction method applies an average monthly production forecast to the base formations using historic production. All production from this well exceeding the forecast will be allocated to the new formation. After 3 years production will stabilize. A production average will be gathered during the 4th year and will be utilized to create a fixed percentage based allocation. Oil production will be allocated based on average formation yields from offset wells. All documentation will be submitted to the Aztec NMOCD office.



August 30, 2019

New Mexico Oil Conservation Division
Attn: Adrienne Sandoval
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Cain 10E (30-045-24109)
Common Ownership in All Depths
San Juan County, New Mexico

Mrs. Sandoval:

In the subject well, Hilcorp plans to downhole trimmingle existing pay from the Otero-Chacara and Basin-Dakota formations with potential pay from the Blanco-Mesaverde formation. In accordance with Subsection C of 19.15.12.11 New Mexico Administrative Code, we have concluded that ownership is the same between all three aforementioned pools. Therefore, this letter serves as Hilcorp Energy's statement that ownership is common throughout all depths in the subject well

This letter represents a good faith effort to adhere with applicable notification requirements. Hilcorp appreciates the opportunity to enhance production from the subject well.

Please contact Brad Pearson by email at bpearson@hilcorp.com or by phone at 713-289-2793 with any questions you may have.

Regards,

A handwritten signature in black ink that reads 'Bradley W. Pearson'.

Landman
Hilcorp Energy Company
713-289-2793

Encl.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMSF080781

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
CAIN 10E9. API Well No.
30-045-2410910. Field and Pool or Exploratory Area
BLANCO MESAVERDE

11. County or Parish, State

SAN JUAN COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2. Name of Operator
HILCORP ENERGY COMPANYContact: CHERYLENE WESTON
E-Mail: cweston@hilcorp.com3a. Address
382 ROAD 3100
AZTEC, NM 874103b. Phone No. (include area code)
Ph: 505-564-0779

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 15 T28N R10W Mer NMP SENW 1665FNL 1820FWL
36.664780 N Lat, 107.885220 W Lon**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Hilcorp Energy Company plans to recomplete the subject well in the Mesaverde formation and downhole commingle with the existing Chacra and Dakota. Attached is the MV C-102, recomplete procedure and wellbore schematic. The DHC application will be submitted and approved prior to commingling. A closed loop system will be utilized. A Pre-Reclamation site visit was held on 8/28/19 with Bob Switzer/BLM. The reclamation plan is attached.

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #481286 verified by the BLM Well Information System
For HILCORP ENERGY COMPANY, sent to the Farmington**

Name (Printed/Typed) CHERYLENE WESTON

Title OPERATIONS/REGULATORY TECH-SR

Signature (Electronic Submission)

Date 08/30/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****