

RECEIVED: <b>03/01/2016</b>	REVIEWER: <b>MA</b>	TYPE: <b>DHL</b>	APP NO: <b>PMAM19063 30488</b>
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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 Company**OGRID Number:** 372171**Well Name:** Ludwick LS #18M**API:** 30-045-29563**Pool:** Aztec Pictured Cliffs**Pool Code:** 71280

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

**DHL-4959****1) TYPE OF APPLICATION:** Check those which apply for [A]

A. Location – Spacing Unit – Simultaneous Dedication

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

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

[I] Commingling – Storage – Measurement

☒ DHC☐ CTB☐ PLC☐ PC☐ OLS☐ OLM

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

☐ WFX☐ PMX☐ SWD☐ IPI☐ EOR☐ PPR**2) NOTIFICATION REQUIRED TO:** Check those which apply.A. ☐ Offset operators or lease 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

**2-28-19**

505-564-0779

Phone Number

cweston@hilcorp.com

e-mail Address

District I  
1625 N. French Drive, Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

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  
X Yes No

APPLICATION FOR DOWNHOLE COMMINGLING

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

Ludwick LS #18M Unit F (SENW) Section 6, T29N, R10W San Juan  
Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 372171 Property Code 318862 API No. 30-045-29563 Lease Type: X Federal State Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Aztec-Pictured Cliffs	Blanco-Mesaverde	Basin-Dakota
Pool Code	71280	72319	71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2293' – 2360' est.	4276' – 4893'	6683' – 6798'
Method of Production (Flowing or Artificial Lift)	NEW ZONE	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)	484 psi	367 psi	754 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1,158 BTU	1,222 BTU	1,222 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: 12/31/2018  Rates: 0 Bbl Oil, 1729 Mcf Gas 1 Bbl Water	Date: 12/31/2018  Rates: 0 Bbl Oil, 72 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 X No  
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes No X

Are all produced fluids from all commingled zones compatible with each other? Yes X No

Will commingling decrease the value of production? Yes No X

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes X No

NMOCD Reference Case No. applicable to this well:

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

PRE-APPROVED POOLS

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

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

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

SIGNATURE Cherylene Weston TITLE Operations/Regulatory Technician-Sr. DATE 2-28-19  
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 262487

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-045-29563	2. Pool Code 71280	3. Pool Name AZTEC PICTURED CLIFFS (GAS)
4. Property Code 318862	5. Property Name LUDWICK LS	6. Well No. 018M
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 5933

**10. Surface Location**

UL - Lot F	Section 6	Township 29N	Range 10W	Lot Idn	Feet From 1450	N/S Line N	Feet From 1505	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 141.14 NW/4	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**

	<b>OPERATOR CERTIFICATION</b>	
	<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>	
	E-Signed By: <i>Cherylene Weston</i> Title: Cherylene Weston, Operations/Regulatory Tech-Sr. Date: 01/17/2019	
	<b>SURVEYOR CERTIFICATION</b>	
<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>		
Surveyed By: NEALE C. EDWARDS Date of Survey: 2/13/1998 Certificate Number: 6857		

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer CO, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-99563</b>		*Pool Code <b>72319 / 71599</b>	*Pool Name <b>BLANCO MESAVERDE / BASIN DAKOTA</b>
*Property Code <b>22398</b>	*Property Name <b>LUDWICK LS</b>		*Well Number <b>18M</b>
*OGRID No. <b>005073</b>	*Operator Name <b>CONOCO, INC.</b>		*Elevation <b>5933</b>

#### 10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	6	29N	10W		1450	NORTH	1505	WEST	SAN JUAN

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

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

*Dedicated Acres <b>294.07</b>	*Joint or Infill	*Consolidation Code	*Order No.
<b>320</b>			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
ON A 160 ACRE STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

1156.32'		1284.36'		2644.62'	
1296.24'	11	10	9/8 25	8	1246.08'
1505'	12	13	14	15	1229.58'
1295.58'	12	13	14	15	1229.58'
2600.40'	19	18	22	23	2459.82'
1094.94'	20	21	22	23	2694.78'
1203.18'		2694.78'			

#### 7 OPERATOR CERTIFICATION

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

*Mike L. Mankin*  
Signature  
Mike L. Mankin  
Printed Name  
Right-Of-Way Agent  
Title  
2-2-98  
Date

#### 8 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.

FEBRUARY 13, 1998  
Date of Survey

*Neale C. Edwards*  
Signature and Seal of Professional Surveyor

NEALE C. EDWARDS  
NEW MEXICO  
68571  
68571  
Certificate Number

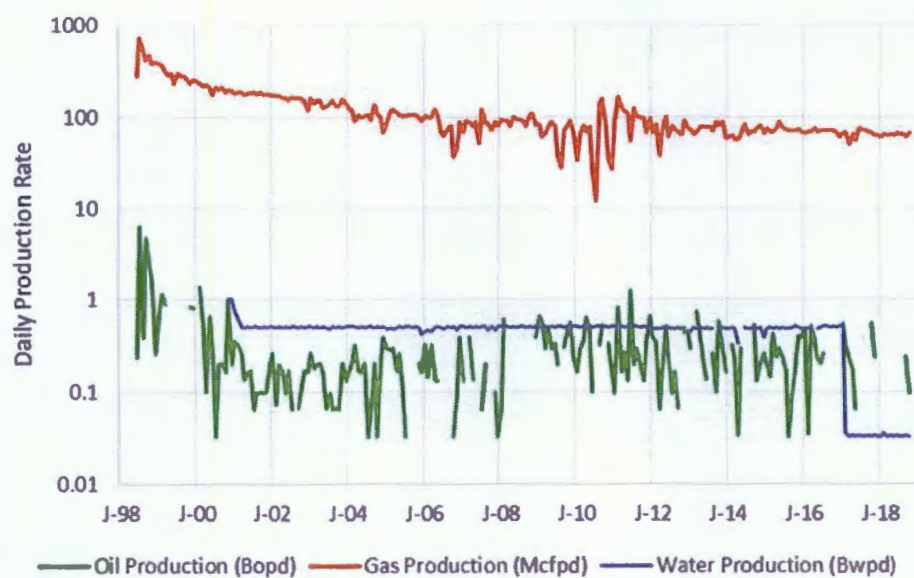
### RECEIVED

MAR 25 1998

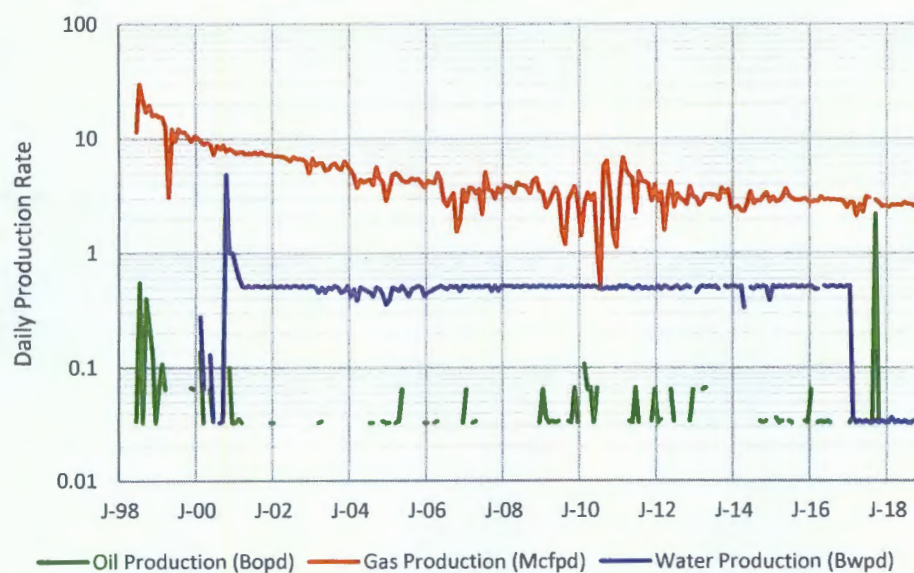
OIL CON. DIV.  
DIST. 3

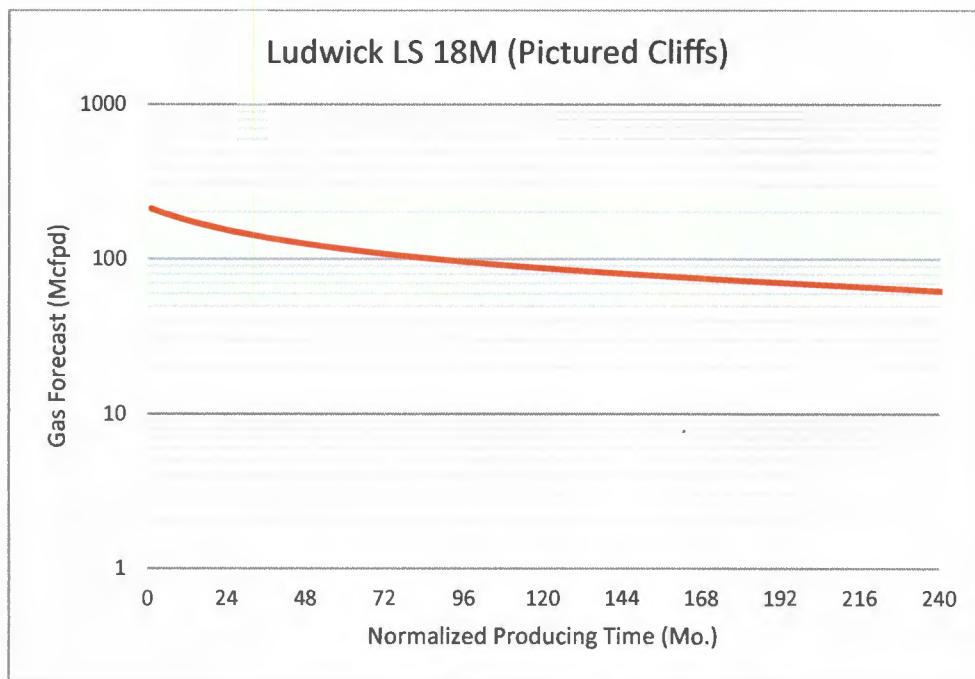


Ludwick LS 18M (Mesaverde)



Ludwick LS 18M (Dakota)





The forecast for Pictured Cliffs production has been generated using a type curve of PC 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.

To obtain the BHP of existing completions, the well was shut-in for 4 hours and a casing fluid level and casing pressure were obtained to estimate SIBHP. This pressure is not intended to represent static reservoir pressure but rather BHP observed within the stated wellbore. The low BHP of the deeper zones does not allow for any adverse effects to the shallow zones. The low inflow and artificial lift application does not represent a risk of cross-flow from the new, shallow completion to the deeper zones.

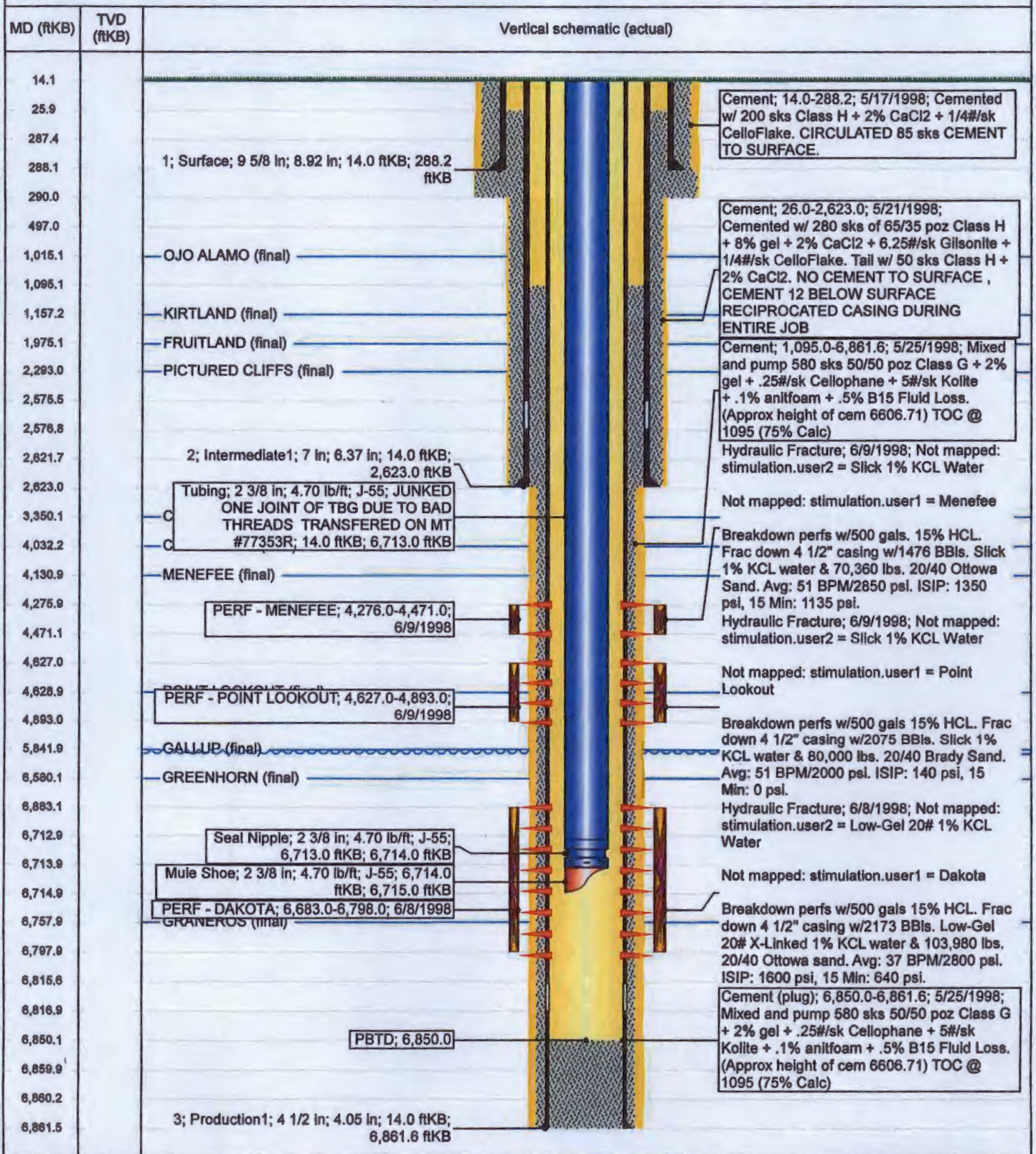
## Ludwick LS 18M – Production Allocation Method

Production for the downhole commingle will be allocated using the subtraction method in agreement with local agencies. The base formations are the Dakota and Mesaverde. The added formation to be commingled is the Pictured Cliffs. 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 4<sup>th</sup> 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.



**Well Name: LUDWICK LS 018M**

API/UWI 3004529563	Surface Legal Location 006-029N-010W-F	Field Name MV/DK COM	Route 0702	State/Province NEW MEXICO	Well Configuration Type Vertical
Ground Elevation (ft) 5,933.00	Original KB/RT Elevation (ft) 5,947.00	KB-Ground Distance (ft) 14.00	KB-Casing Flange Distance (ft) 14.00	KB-Tubing Hanger Distance (ft) 14.00	

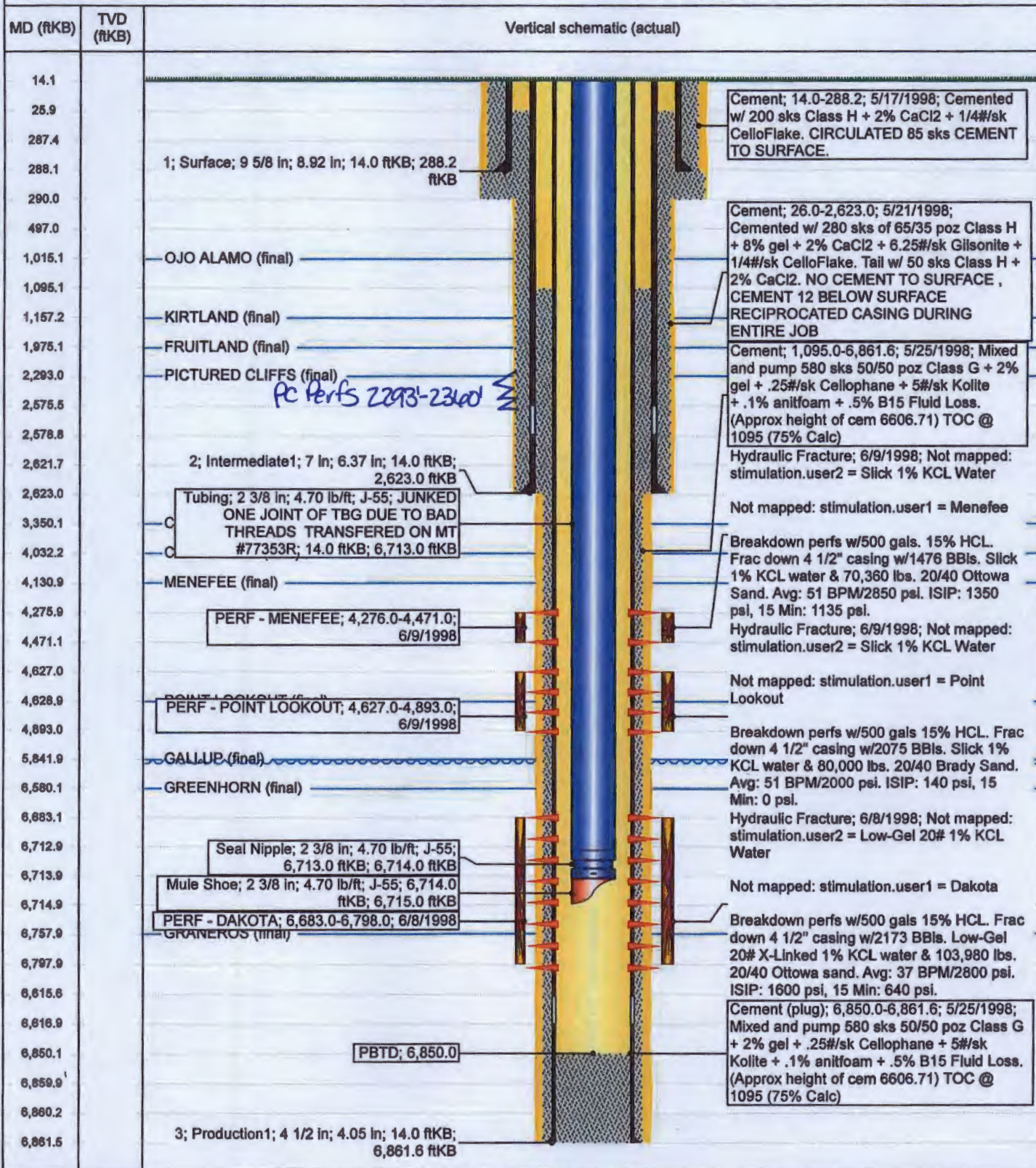
**Vertical, Original Hole, 1/21/2019 9:12:03 AM**




**Well Name: LUDWICK LS 018M**

API / UWI 3004529563	Surface Legal Location 006-029N-010W-F	Field Name MV/DK COM	Route 0702	State/Province NEW MEXICO	Well Configuration Type Vertical
Ground Elevation (ft) 5,933.00	Original KB/RT Elevation (ft) 5,947.00	KB-Ground Distance (ft) 14.00	KB-Casing Flange Distance (ft) 14.00	KB-Tubing Hanger Distance (ft) 14.00	

Vertical, Original Hole, 1/21/2019 9:12:03 AM





February 28, 2019

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

Re: Ludwick LS 18M (30-045-29563)  
Common Ownership in All Depths  
San Juan County, New Mexico

To Whom It May Concern:

In the subject well, Hilcorp plans to downhole commingle existing pay from the Basin Dakota and Blanco Mesaverde formations with potential pay from a Aztec Pictured Cliffs 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](mailto: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.





**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

**OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87506  
(805) 827-7131**

**ADMINISTRATIVE ORDER DHC-1913**

Conoco Inc.  
10 Desta Drive  
Suite 100W  
Midland, Texas 79705-4500

Attention: Ms. Kay Maddox

*Ludwick "LS" No. 18M  
API No. - N/A  
Unit F, Section 6, Township 29 North, Range 10 West, NMPM,  
San Juan County, New Mexico.  
Blanco-Mesaverde (Prorated Gas - 72319) and  
Basin-Dakota (Prorated Gas - 71599) Pools*

Dear Ms. Maddox:

Reference is made to your recent application for an exception to Rule 303.A. of the Division Rules and Regulations to permit the above described well to commingle production from the subject pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 303.C., and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the zones is hereby placed in abeyance.

The maximum amount of gas which may be produced daily from the well shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated pool as printed in the Division's San Juan Basin Gas Proration Schedule.

The applicant shall consult with the supervisor of the Aztec District Office of the Division upon completion and testing of the well in order to establish a fixed allocation of production from each of the commingled zones. Upon approval by the Division's District Office, the applicant shall submit the allocation formula to the Santa Fe Office of the Division.

**REMARKS:** The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.



*Administrative Order DHC-1913*

*Conoco Inc.*

*April 27, 1998*

*Page 2*

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Pursuant to Rule 303.H., the commingling authority granted herein may be rescinded by the Division Director if conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 27th day of April, 1998.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
LORI WROTENBERY  
Director

S E A L

LW/DRC

cc: Oil Conservation Division - Aztec  
Bureau of Land Management-Farmington

**McMillan, Michael, EMNRD**

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**From:** McMillan, Michael, EMNRD  
**Sent:** Monday, March 4, 2019 9:10 AM  
**To:** 'Cheryl Weston'  
**Subject:** Ludwick LS Well No. 18M

Cherylene:

Verify how long the well was shut in to get the BHP

Your application states the well was shut in XX Hours.

**I am not clear what XX hours mean**

The OCD will not approve your DHC until the verify how long the well was tested. Further, I am suspending your application until I receive the required information.

Next time, verify the writeup before you apply for the administrative application.

Michael McMillan  
1220 South St. Francis  
Santa Fe, New Mexico  
505-476-3448  
Michael.mcmillan@state.nm.us

Production Summary Report API: 30-045-29563 LUDWICK LS #018M					
Year	Pool	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days P/I
7/1/2018	(71599) BASIN DAKOTA (PRORATED GAS)	0	83	1	31
8/1/2018	(71599) BASIN DAKOTA (PRORATED GAS)	0	83	1	31
9/1/2018	(71599) BASIN DAKOTA (PRORATED GAS)	1	77	1	30
10/1/2018	(71599) BASIN DAKOTA (PRORATED GAS)	0	86	1	31
11/1/2018	(71599) BASIN DAKOTA (PRORATED GAS)	0	82	1	30
12/1/2018	(71599) BASIN DAKOTA (PRORATED GAS)	0	72	1	31
7/1/2018	(72319) BLANCO-MESAVERDE (PRORATED GAS)	0	1972	1	31
8/1/2018	(72319) BLANCO-MESAVERDE (PRORATED GAS)	0	1979	1	31
9/1/2018	(72319) BLANCO-MESAVERDE (PRORATED GAS)	7	1824	1	30
10/1/2018	(72319) BLANCO-MESAVERDE (PRORATED GAS)	3	2069	1	31
11/1/2018	(72319) BLANCO-MESAVERDE (PRORATED GAS)	0	1975	1	30
12/1/2018	(72319) BLANCO-MESAVERDE (PRORATED GAS)	0	1729	1	31
Cum		2338	921057		