

# Initial Application Part I

Received: 06/28/2019

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

RECEIVED: <b>06/28/2019</b>	REVIEWER: <b>MAM</b>	TYPE: <b>DHC</b>	APP NO: <b>pMAM1918355644</b>
--------------------------------	-------------------------	---------------------	----------------------------------

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:** San Juan 29-5 Unit 70G **API:** 30-039-29653  
**Pool:** Gobernador Pictured Cliffs **Pool Code:** 77440

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

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

A. Location – Spacing Unit – Simultaneous Dedication

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

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

[ I ] Commingling – Storage – Measurement

☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

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

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

**DHC-5017**

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

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

**FOR OCD ONLY**

- ☐ Notice Complete  
☐ Application Content Complete

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

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

**Nick Kunze**

Print or Type Name

Signature

Date

(713)209-2400

Phone Number

nkunze@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  
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

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

San Juan 29-5 Unit 70G Unit B – Sec 28 – T29N – R05W Rio Arriba  
Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 372171 Property Code 318837 API No. 30-039-29653 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Gobernador Pictured Cliffs	Blanco Mesaverde	Basin Dakota
Pool Code	77440	72319	71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	3620' – 3711'	5430' – 5940'	7902' – 7982'
Method of Production (Flowing or Artificial Lift)	New Zone	Plunger	Plunger
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)	1283 psi	708 psi	2368 psi
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1190 BTU	1150 BTU	1020 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: 3/2019  Rates: 2 bo, 2013 mcf, 9 bw	Date: 3/2019  Rates: 384 mcf, 9 bw
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: R-10770

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

PRE-APPROVED POOLS

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

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

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

SIGNATURE  TITLE Reservoir Engineer DATE 6/28/19

TYPE OR PRINT NAME Tim Davis TELEPHONE NO. ( 713 ) 209-2400

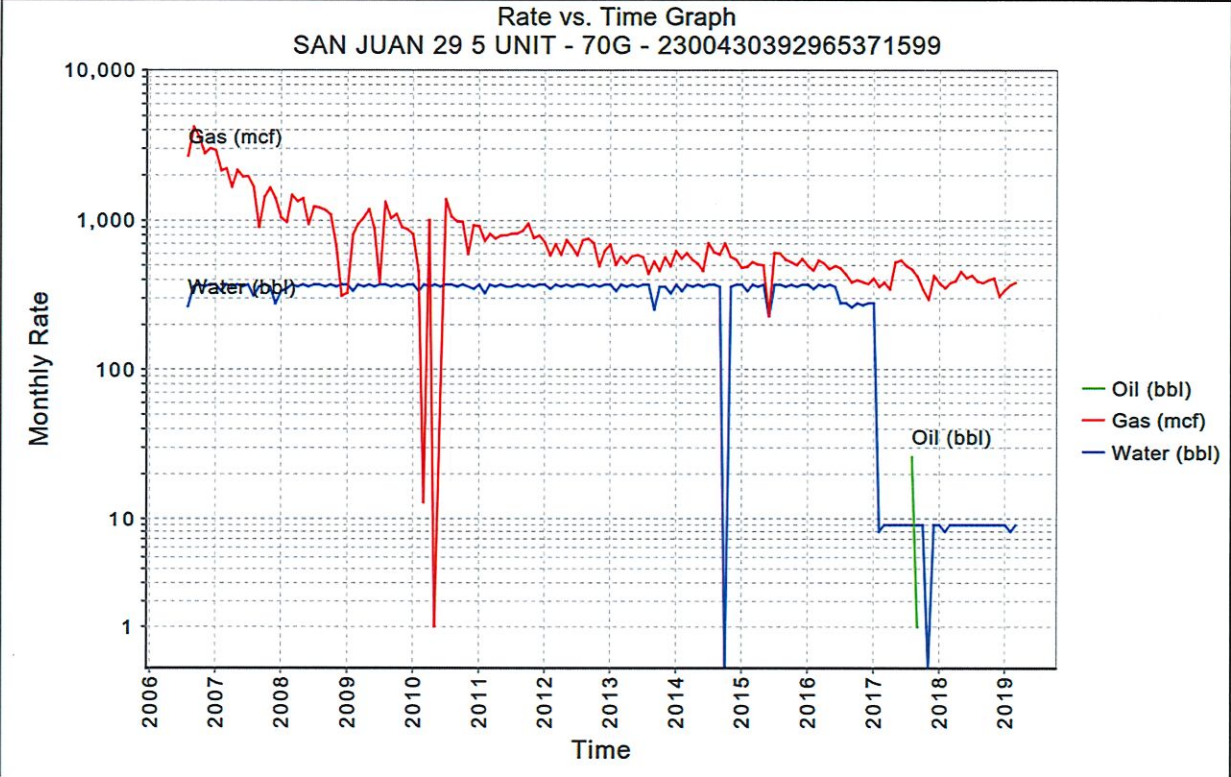
E-MAIL ADDRESS tidavis@hilcorp.com

Discussion of Pressures

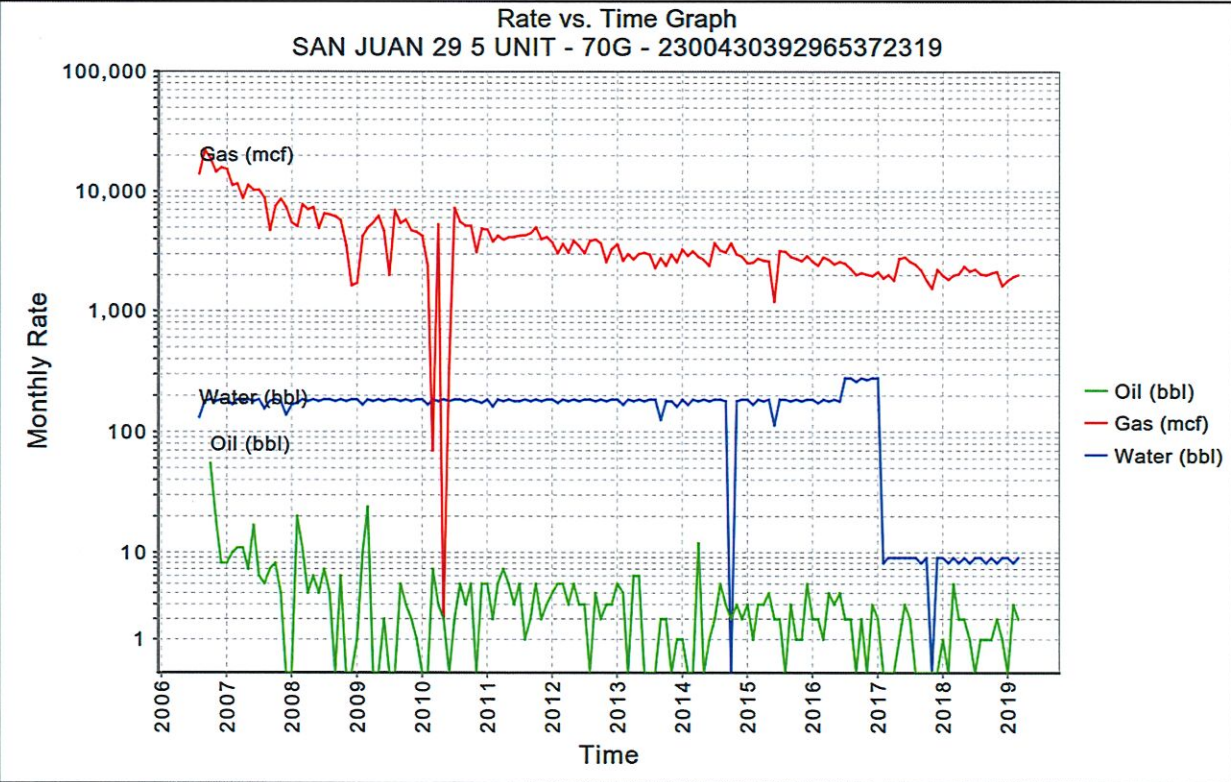
Well Name	API	Existing Completion Zones (Perfs)	Measurement Date	SITP/SICP (psia)	Fluid Level (ft)
SAN JUAN 29-5 UNIT 70G	300392965300	Mesaverde (5430-5940') Dakota (7902-7982')	6/25/2019	120/115	7595'

Prior to obtaining fluid levels and pressures, the well was shut-in for 24 hours and monitored to ensure it was relatively stable. The length of time was chosen to minimize the shut-in period and provide a representation the shut-in bottomhole pressure from the existing Mesaverde and Dakota zones. This measurement demonstrates a much lower wellbore pressure compared to our calculated static reservoir pressures. Based on pressure transient analysis work from other Dakota wells in the basin, direct measurement of static reservoir pressures from producing wells in these tight gas sandstones requires shut-in periods on the order of years, primarily due to low permeability, relatively high total compressibility, and lack of structural or stratigraphic boundaries. Back of the envelope radius of investigation calculations assuming radial flow indicate required shut in periods of 5 to 7 years given the low density of producing wells. As well, we have some multi-week build-ups in the Dakota in other parts of the basin that indicate even longer shut-in times, up to 25 years, to reach boundary-dominated flow. The shut-in wellbore pressure thus is expected to be lower than the far-field, stabilized reservoir pressure, direct measurement of which is practically infeasible. Our observation is that even for areas of high static reservoir pressure, the low permeability of the reservoir rock results in rapid depletion of the near-fracture region, quickly enough that the wells are unable produce without the aid of a plunger. Given low permeabilities and low wellbore flowing pressures in the Dakota, Mesaverde, and Pictured Cliffs, loss of reserves due to cross-flow is not an issue during producing or shut-in periods. Given low shut-in bottomhole pressures, commingling the Pictured Cliffs, Mesaverde, and Dakota in this well will not result in shut-in or flowing wellbore pressures in excess of any commingled pool's fracture parting pressure.

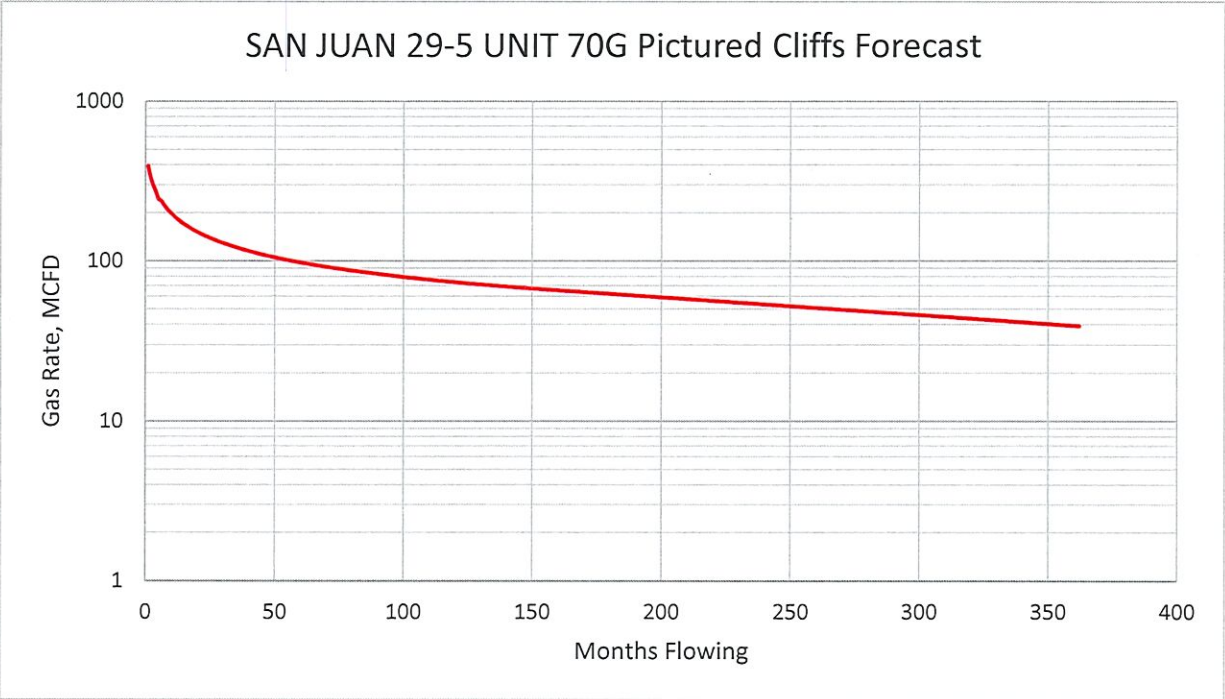
SAN JUAN 29-5 UNIT 70G – HISTORICAL DAKOTA PRODUCTION:



SAN JUAN 29-5 UNIT 70G – HISTORICAL MESAVERDE PRODUCTION:



SAN JUAN 29-5 UNIT 70G – PICTURED CLIFFS PRODUCTION FORECAST



The forecast for Pictured Cliffs production has been generated using a typical well production profile of PC gas production in the surrounding production trend.

SAN JUAN 29-5 UNIT 70G – PRODUCTION ALLOCATION METHOD

Production for the downhole commingle will be allocated using the subtraction method in agreement with the BLM. The base formations are the Dakota and Mesaverde, and 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.

**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 268409

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-039-29653	2. Pool Code 77440	3. Pool Name GOBERNADOR PICTURED CLIFFS (GAS)
4. Property Code 318837	5. Property Name SAN JUAN 29 5 UNIT	6. Well No. 070G
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 6674

**10. Surface Location**

UL - Lot B	Section 28	Township 29N	Range 05W	Lot Idn	Feet From 570	N/S Line N	Feet From 2480	E/W Line E	County RIO ARRIBA
---------------	---------------	-----------------	--------------	---------	------------------	---------------	-------------------	---------------	----------------------

**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 E/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**

<table><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>																	<p><b>OPERATOR CERTIFICATION</b></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>Etta Trujillo</i> Title: Operations/Regulatory Sr Date: 06/10/2019</p> <p><b>SURVEYOR CERTIFICATION</b></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: Jason Edwards Date of Survey: 7/20/2005 Certificate Number: 15269</p>

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(505) 393-6161 Fax:(505) 393-0720

**District II**

1301 W. Grand Ave., Artesia, NM 88210  
Phone:(505) 748-1283 Fax:(505) 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  
Permit 15563

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-039-29653	2. Pool Code 71599	3. Pool Name BASIN DAKOTA (PRORATED GAS)
4. Property Code 31325	5. Property Name SAN JUAN 29 5 UNIT	6. Well No. 070G
7. OGRID No. 217817	8. Operator Name CONOCOPHILLIPS COMPANY	9. Elevation 6674

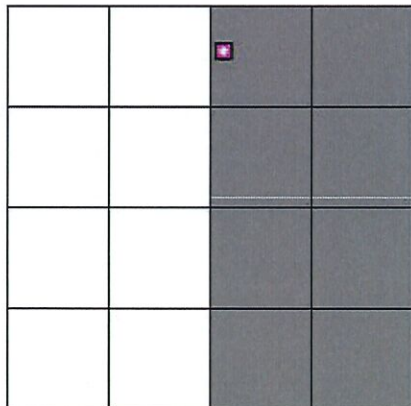
**10. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
B	28	29N	05W	B	570	N	2480	E	RIO ARriba

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

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

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

**OPERATOR CERTIFICATION**

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

E-Signed By: Yolanda Perez

Title: Sr. Regulatory Analyst

Date: 9/13/2005

**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: jason edwards

Date of Survey: 7/20/2005

Certificate Number: 15269

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(505) 393-6161 Fax:(505) 393-0720

**District II**

1301 W. Grand Ave., Artesia, NM 88210  
Phone:(505) 748-1283 Fax:(505) 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  
Permit 15563

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-039-29653	2. Pool Code 72319	3. Pool Name BLANCO-MESAVERDE (PRORATED GAS)
4. Property Code 31325	5. Property Name SAN JUAN 29 5 UNIT	6. Well No. 070G
7. OGRID No. 217817	8. Operator Name CONOCOPHILLIPS COMPANY	9. Elevation 6674

**10. Surface Location**

UL - Lot B	Section 28	Township 29N	Range 05W	Lot Idn B	Feet From 570	N/S Line N	Feet From 2480	E/W Line E	County RIO ARriba
---------------	---------------	-----------------	--------------	--------------	------------------	---------------	-------------------	---------------	----------------------

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

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

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

<table><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>																	<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.</i> E-Signed By: Yolanda Perez Title: Sr. Regulatory Analyst Date: 9/13/2005
	<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: jason edwards Date of Survey: 7/20/2005 Certificate Number: 15269																

Submit 1 Copy To Appropriate District Office  
District I – (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240  
District II – (575) 748-1283  
811 S. First St., Artesia, NM 88210  
District III – (505) 334-6178  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV – (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised July 18, 2013

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO.  
30-039-29653

5. Indicate Type of Lease  
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

San Juan 29-5 Unit

8. Well Number 70G

9. OGRID Number

372171

10. Pool name or Wildcat

Gobernador PC/Blanco MV/Basin DK

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

HILCORP ENERGY COMPANY

3. Address of Operator

382 Road 3100, Aztec, NM 87410

4. Well Location

Unit Letter B : 570 feet from the North line and 2480 feet from the East line  
Section 28 Township 29N Range 05W NMPM Rio Arriba County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
6674'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
DOWNHOLE COMMINGLE ☐  
CLOSED-LOOP SYSTEM ☐  
OTHER: Recomplete ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Hilcorp Energy Company plans to recomplete the subject well in the Pictured Cliffs formation and downhole commingle the existing Mesaverde and Dakota formations. Attached is the PC C102, recomplete procedure & wellbore schematic. The DHC application will be submitted and approved prior to commingling. A closed loop system will be utilized.

Spud Date:

Rig Release Date:

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

SIGNATURE

*Etta Trujillo*

TITLE Operations/Regulatory Technician – Sr. DATE 6/6/2019

Type or print name Etta Trujillo

E-mail address: ettrujillo@hilcorp.com PHONE: (505)324-5161

For State Use Only

APPROVED BY:

TITLE

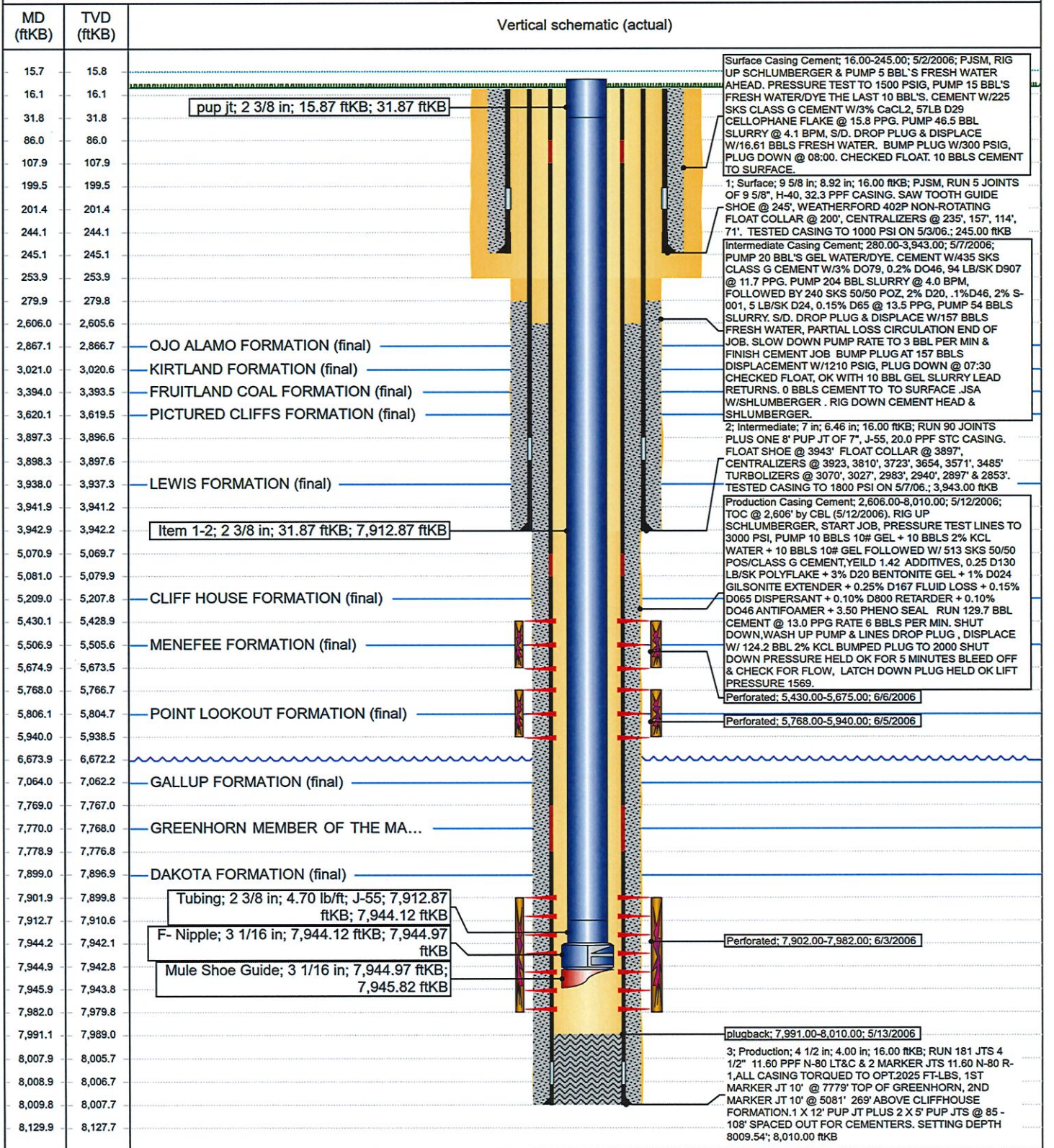
DATE

Conditions of Approval (if any):

Well Name: SAN JUAN 29-5 UNIT #70G

API / UWI 3003929653	Surface Legal Location 028-029N-005W-B	Field Name MV/DK COM	Route 1307	State/Province NEW MEXICO	Well Configuration Type Vertical
Ground Elevation (ft) 6,674.00	Original KB/RT Elevation (ft) 6,690.00	KB-Ground Distance (ft) 16.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

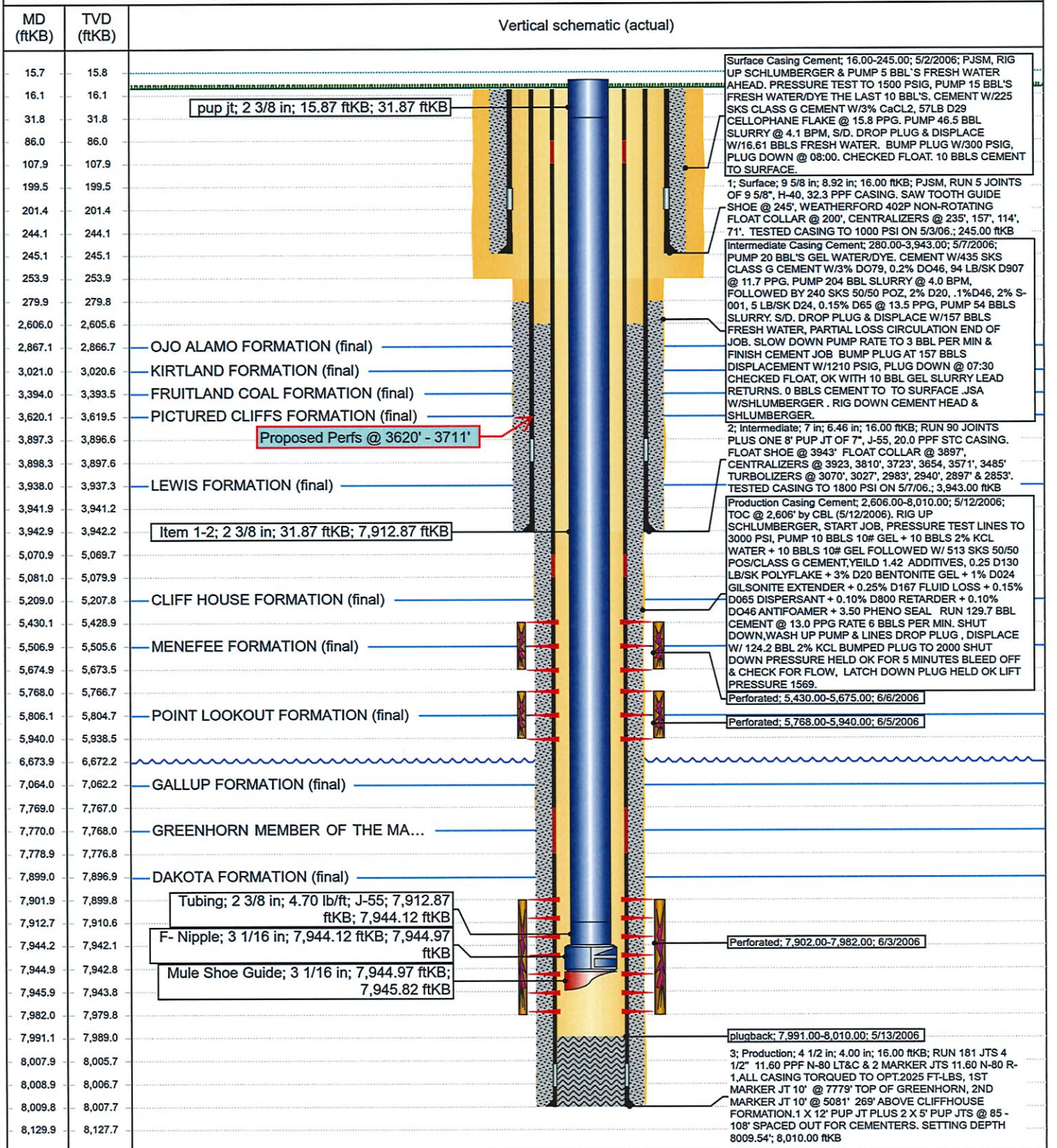
Vertical, Original Hole, 6/12/2019 9:11:55 AM



Well Name: SAN JUAN 29-5 UNIT #70G

API / UWI 3003929653	Surface Legal Location 028-029N-005W-B	Field Name MV/DK COM	Route 1307	State/Province NEW MEXICO	Well Configuration Type Vertical
Ground Elevation (ft) 6,674.00	Original KB/RT Elevation (ft) 6,690.00	KB-Ground Distance (ft) 16.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

Vertical, Original Hole, 6/12/2019 9:11:55 AM



To reuse, cover or mark through any previous shipping information.

ORIGIN ID: EIXA (713) 289-2643  
SEYLOH MCPHOY  
HILCORP ENERGY COMPANY  
1111 TRAVIS STREET

HOUSTON, TX 77002  
UNITED STATES US

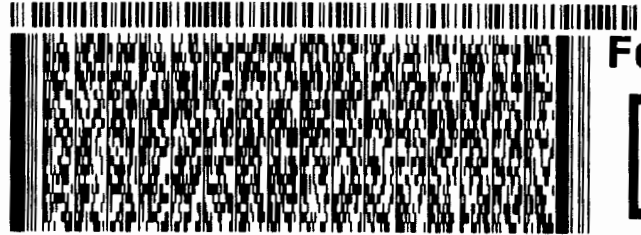
SHIP DATE: 28JUN19  
ACTWGT: 2.00 LB MAN  
CAD: 0272991/CAFE3211

BILL SENDER

TO **GEOLOGICAL & ENGINEERING BUREAU**  
**NEW MEXICO OIL CONSERVATION DIVISIO**  
**1220 SOUTH ST. FRANCIS DR.**

**SANTA FE NM 87505**

DEPT: DOCUMENTS



**FedEx**  
Express



J181118040501 47

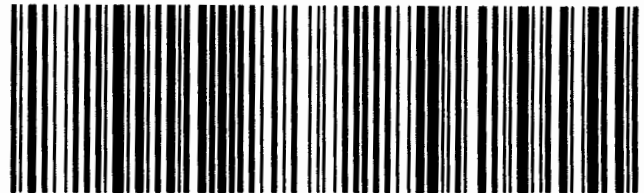
Reusable

2 of 2  
MPS# 1060 7129 8443  
0263  
Mstr# 1060 7129 8432

**MON - 01 JUL 10:30A**  
**PRIORITY OVERNIGHT**

**XX SAFA**

**87505**  
**NM-US ABQ**



SEE NOTICE ON REVERSE regarding UPS Terms, and notice of limitation of liability. Where allowed by law, shipper authorizes UPS to act as forwarding agent for export control and customs purposes. If exported from the US, shipper certifies that the commodities, technology or software were exported from the US in accordance with the Export Administration Regulations. Diversion contrary to law is prohibited. RND 01 02 19

Align bottom of peel-and-stick airbill or pouch here.