

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: 06/28/2019	REVIEWER: MAM	TYPE: DHC	APP NO: pMAM1818354475
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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: San Juan 29-5 Unit 70F **API:** 30-039-29667
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

DHC-5013

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 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 70F Unit P – Sec 28 – T29N – R05W Rio Arriba
Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 372171 Property Code 318837 API No. 30-039-29667 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)	3625' – 3711'	5455' – 5947'	7903' – 7990'
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)	1284 psi	752 psi	2527 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: 3 bo, 2081 mcf, 10 bw	Date: 3/2019 Rates: 339 mcf, 10 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: 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

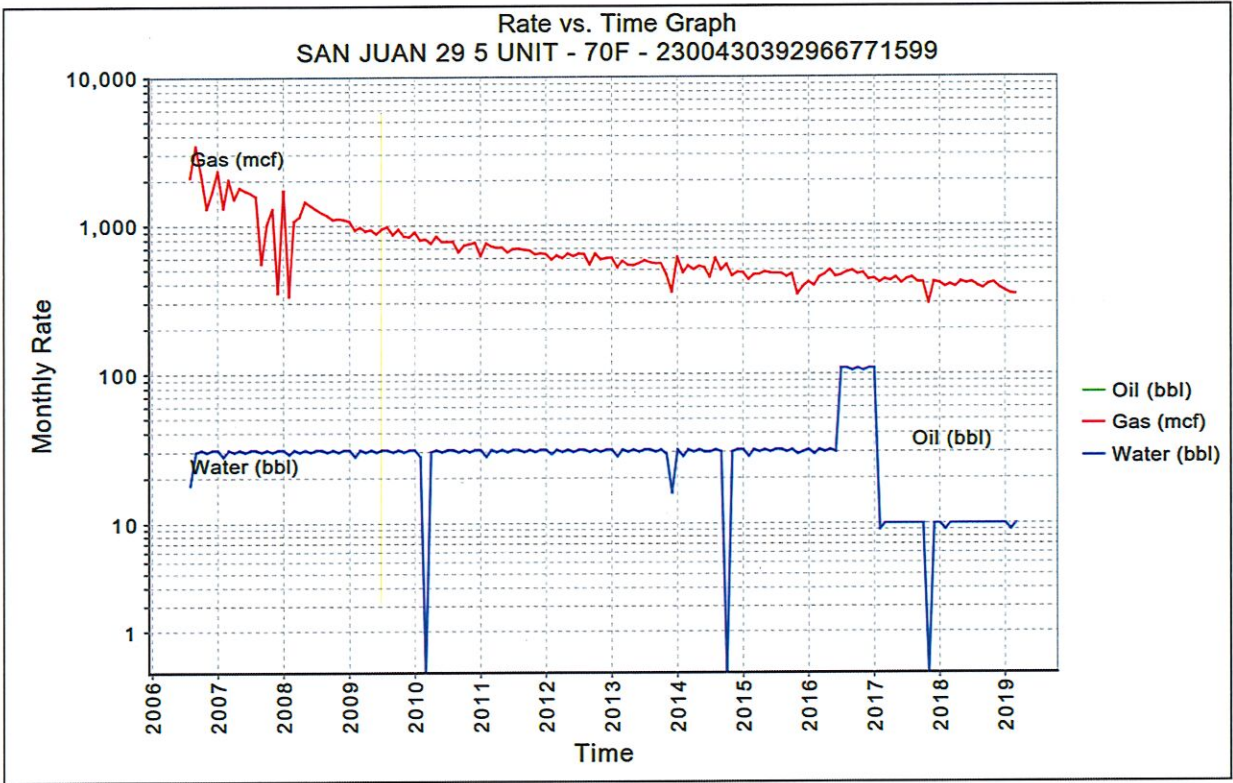
E-MAIL ADDRESS tidavis@hilcorp.com

Discussion of Pressures

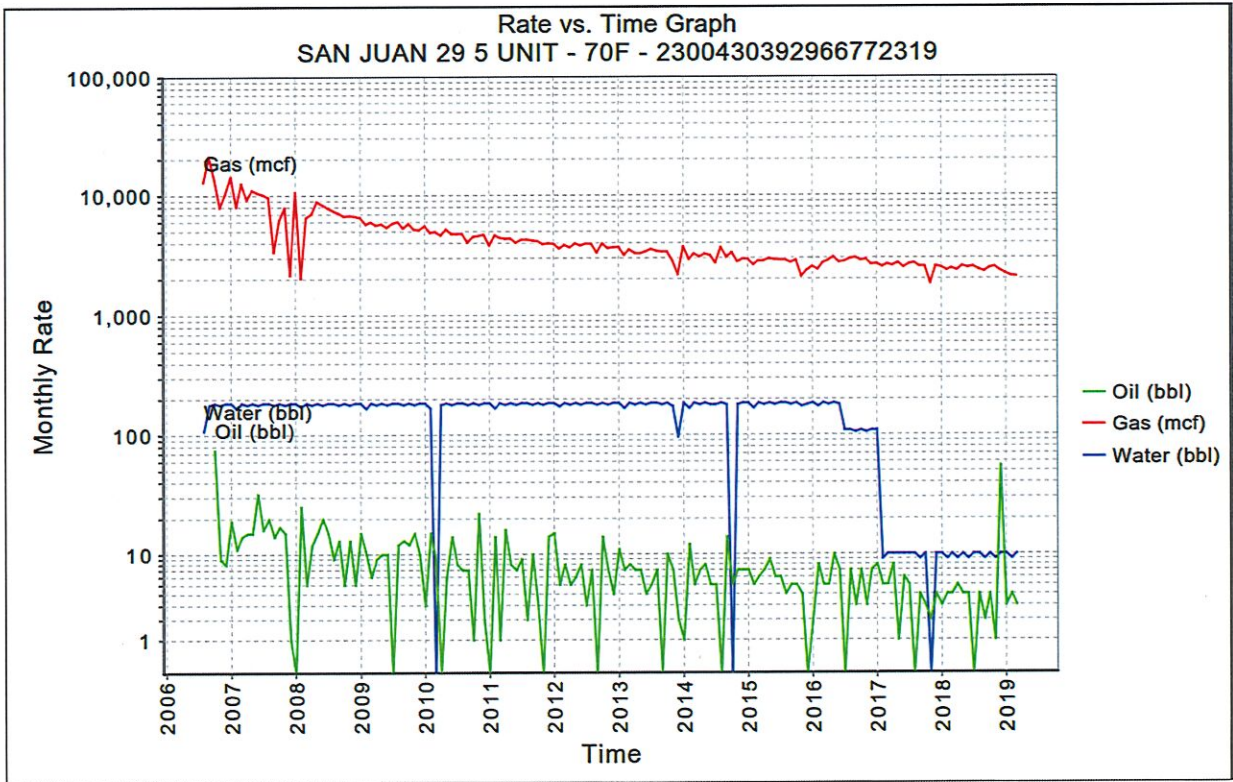
Well Name	API	Existing Completion Zones (Perfs)	Measurement Date	SITP/SICP (psia)	Fluid Level (ft)
SAN JUAN 29-5 UNIT 70F	300392966700	Mesaverde (5455-5947') Dakota (7903-7990')	6/25/2019	134/135	7781'

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.

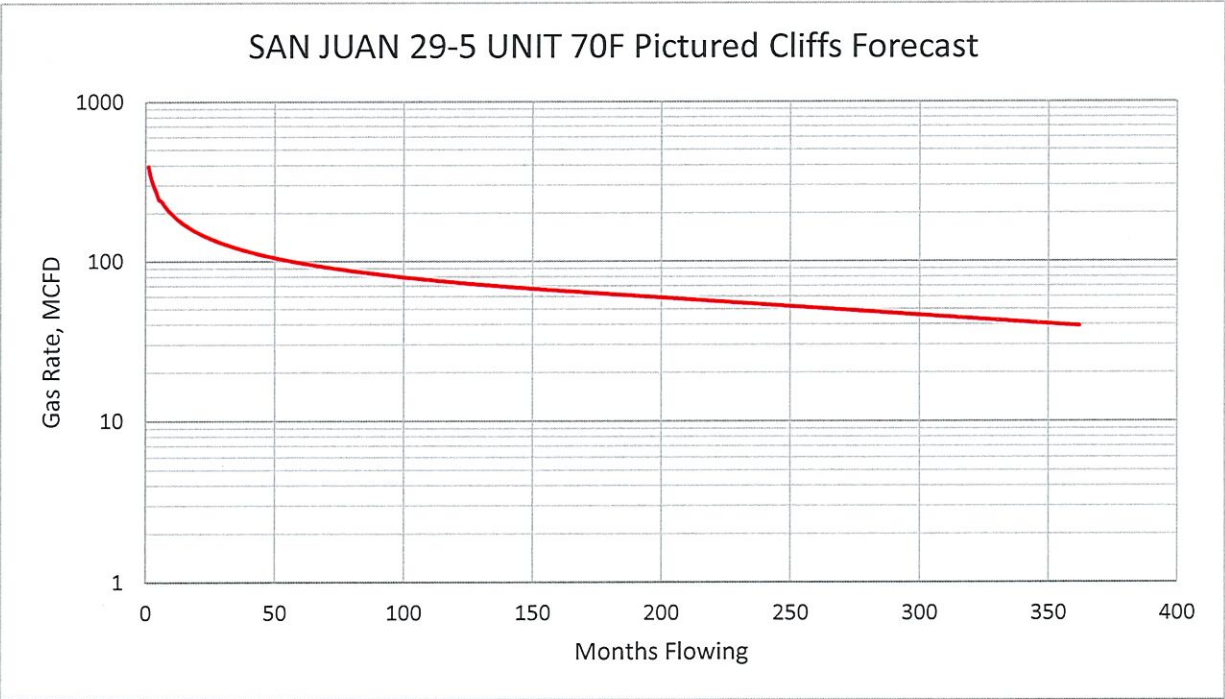
SAN JUAN 29-5 UNIT 70F – HISTORICAL DAKOTA PRODUCTION:



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



SAN JUAN 29-5 UNIT 70F – 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 70F – 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 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.

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 268407

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-039-29667	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. 070F
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 6679

10. Surface Location

UL - Lot P	Section 28	Township 29N	Range 05W	Lot Idn	Feet From 1155	N/S Line S	Feet From 1130	E/W Line E	County RIO ARRIBA
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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 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>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>Etta Trujillo</i> Title: Operations/Regulatory Tech Sr Date: 06/10/2019</p> <p>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: Jason Edwards Date of Survey: 8/18/2005 Certificate Number: 15269</p>

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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 16028

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-29667	Pool Name BASIN DAKOTA (PRORATED GAS)	Pool Code 71599
Property Code 31325	Property Name SAN JUAN 29 5 UNIT	Well No. 070F
OGRID No. 217817	Operator Name CONOCOPHILLIPS COMPANY	Elevation 6679

Surface And Bottom Hole Location

UL or Lot P	Section 28	Township 29N	Range 05W	Lot Idn P	Feet From 1155	N/S Line S	Feet From 1130	E/W Line E	County Rio Arriba
Dedicated Acres 320		Joint or Infill		Consolidation Code		Order No.			

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OPERATOR CERTIFICATION

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

Electronically Signed By: Yolanda Perez

Title: Sr. Regulatory Analyst

Date: 09/22/2005

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: 08/18/2005

Certificate Number: 15269

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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 16028

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-29667	Pool Name BLANCO-MESAVERDE (PRORATED GAS)	Pool Code 72319
Property Code 31325	Property Name SAN JUAN 29 5 UNIT	Well No. 070F
OGRID No. 217817	Operator Name CONOCOPHILLIPS COMPANY	Elevation 6679

Surface And Bottom Hole Location

UL or Lot P	Section 28	Township 29N	Range 05W	Lot Idn P	Feet From 1155	N/S Line S	Feet From 1130	E/W Line E	County Rio Arriba
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Surveyed By: jason edwards

Date of Survey: 08/18/2005

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

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.)		WELL API NO. 30-039-29667
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator HILCORP ENERGY COMPANY		6. State Oil & Gas Lease No.
3. Address of Operator 382 Road 3100, Aztec, NM 87410		7. Lease Name or Unit Agreement Name San Juan 29-5 Unit
4. Well Location Unit Letter <u>P</u> : <u>1155</u> feet from the <u>South</u> line and <u>1130</u> feet from the <u>East</u> line Section <u>28</u> Township <u>29N</u> Range <u>05W</u> NMPM Rio Arriba County		8. Well Number <u>70F</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6679'		9. OGRID Number 372171
		10. Pool name or Wildcat Gobernador PC/Blanco MV/Basin DK

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input type="checkbox"/>	Recomplete <input checked="" type="checkbox"/>	OTHER: <input type="checkbox"/>	

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 6/10/2019

Type or print name Etta Trujillo E-mail address: ettrujillo@hilcorp.com PHONE: (505)324-5161

For State Use Only

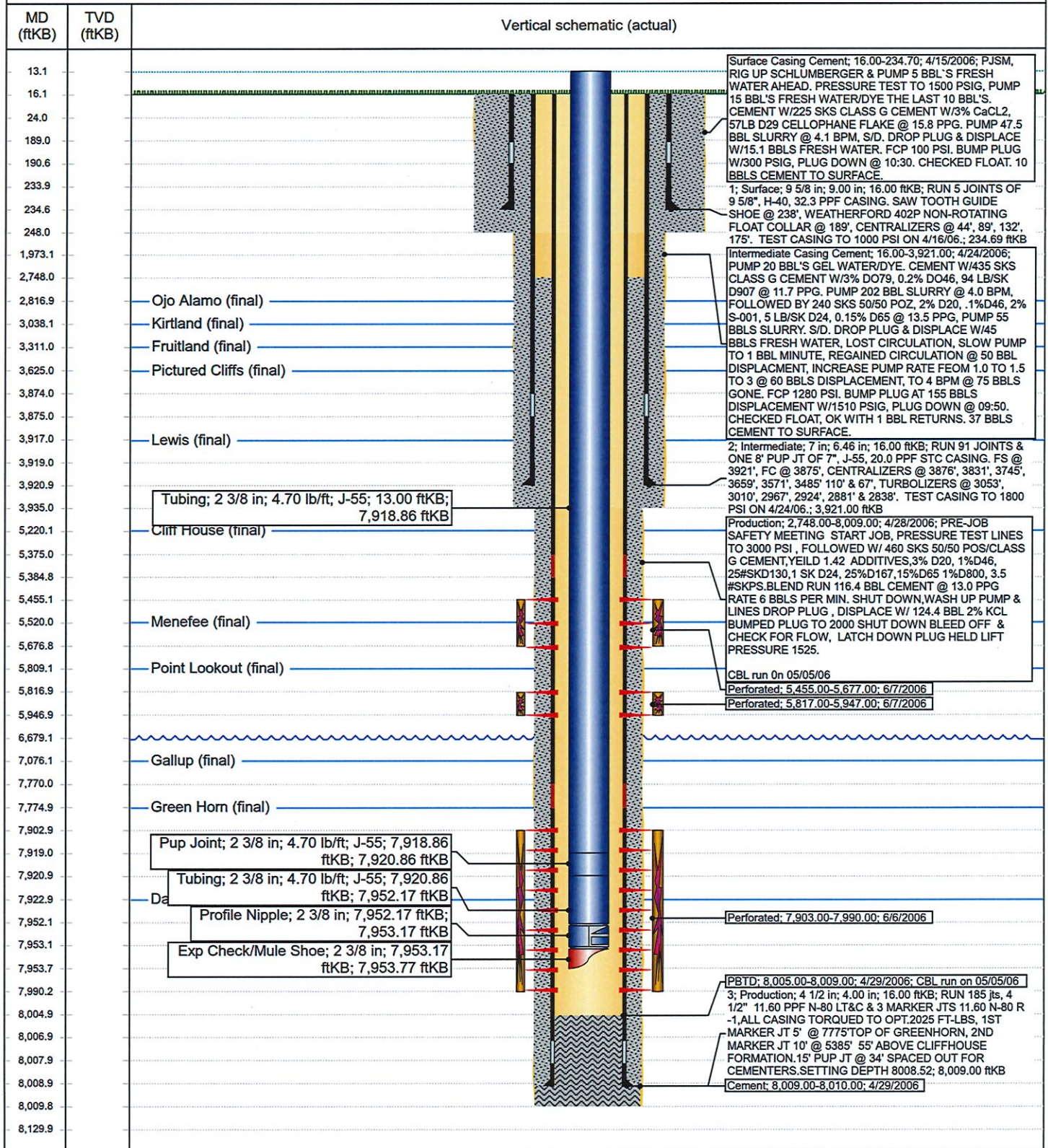
APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

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

API / UWI 3003929667	Surface Legal Location 028-029N-005W-P	Field Name MV/DK COM	Route 1308	State/Province NEW MEXICO	Well Configuration Type Vertical
Ground Elevation (ft) 6,679.00	Original KB/RT Elevation (ft) 6,695.00	KB-Ground Distance (ft) 16.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

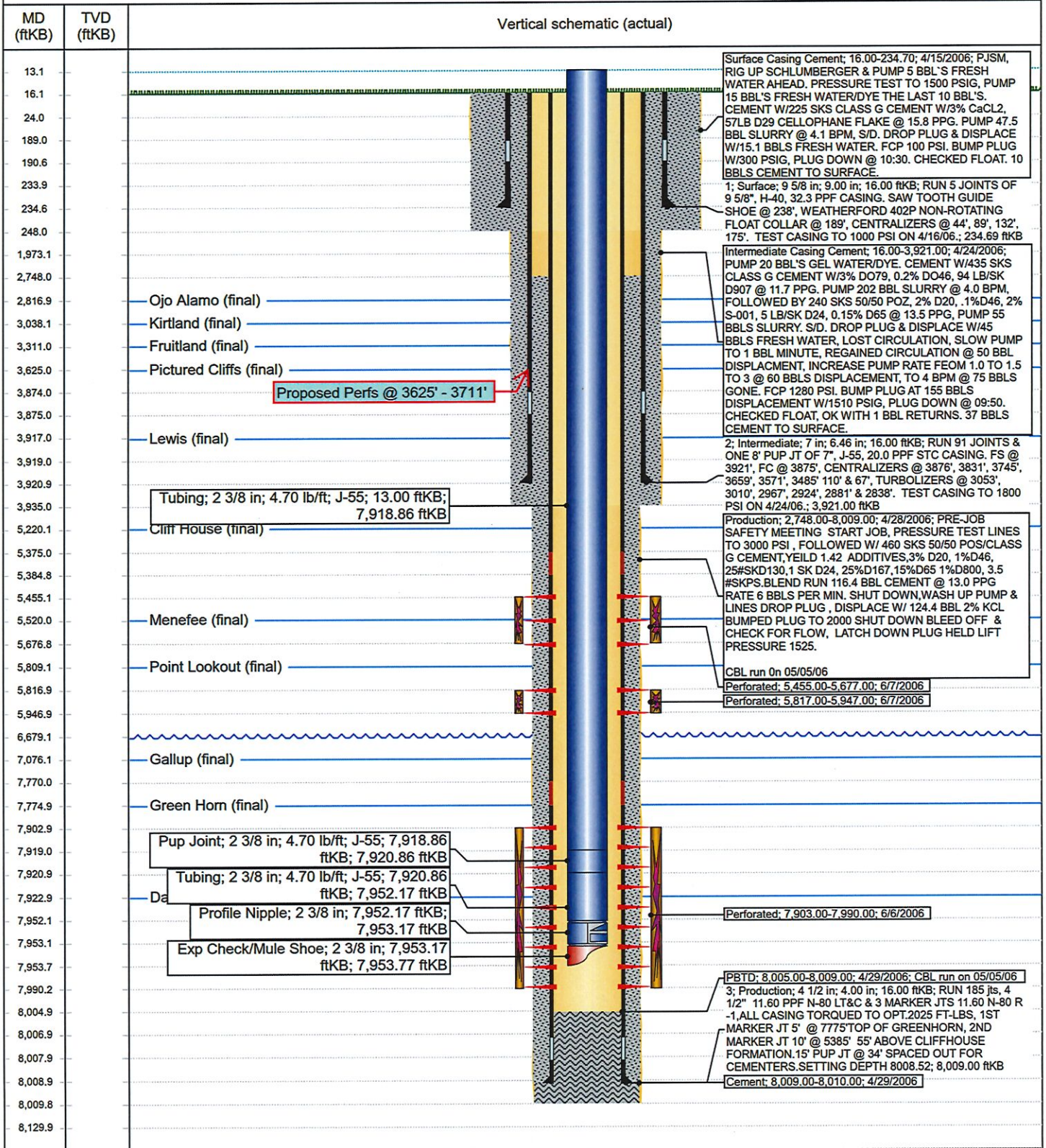
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Vertical, Original Hole, 6/12/2019 2:00:12 PM



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

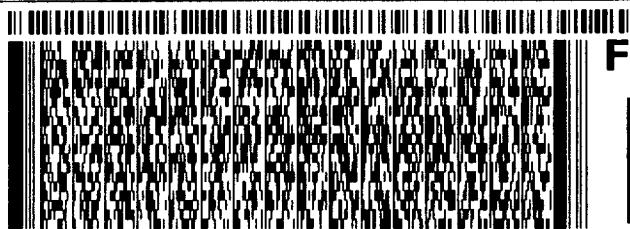
ORIGIN ID: EIXA (713) 289-2643
SEYLOH MCPHOY
HILCORP ENERGY COMPANY
1111 TRAVIS STREET
HOUSTON, TX 77002
UNITED STATES US

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



551C1/2210/104C

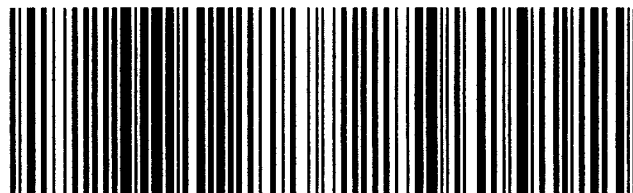
Reusable

1 of 2
TRK# 1060 7129 8432
0201
MASTER

XX SAFA

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

**87505
NM-US ABQ**



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REF: 02/2019

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