

RECEIVED: 05/31/2019	REVIEWER: MAM	TYPE: DHC	APP NO: PMAm 14155 35024
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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 55F API: 30-039-29335
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-4444

DHC 1742A2

- 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	
<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	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

5/22/19
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 55F Unit L – Sec. 18 – T29N – R05W Rio Arriba
Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 372171 Property Code 318837 API No. 30-039-29335 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)	3534' – 3607'	5335' – 5810'	7872' – 7888'
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)	982 psi	551 psi	2471 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: N/A Rates:	Date: 2/2019 Rates: 4 bo, 1132 mcf, 9 bw	Date: 2/2019 Rates: 357 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 ☐

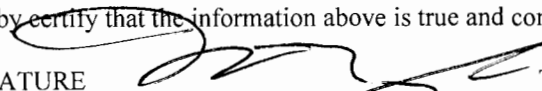
NMOCD Reference Case No. applicable to this well: R-10770

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 Operations Manager DATE 5/22/2019
TYPE OR PRINT NAME Nick Kunze TELEPHONE NO. (713) 209-2400
E-MAIL ADDRESS nkunze@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 252404

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-039-29335	2. Pool Code 77440	3. Pool Name GOVERNADOR PICTURED CLIFFS (GAS)
4. Property Code 318837	5. Property Name SAN JUAN 29 5 UNIT	6. Well No. 055F
7. OGRID No. 372171	8. Operator Name HILCORP ENERGY COMPANY	9. Elevation 6598

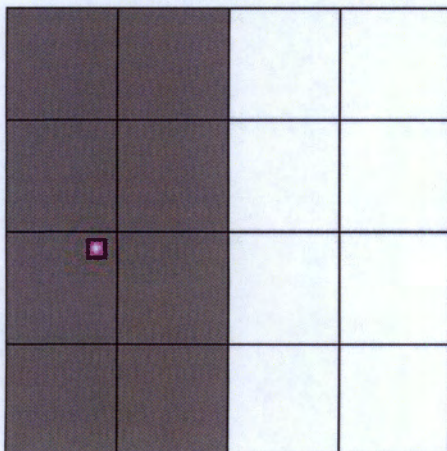
10. Surface Location

UL - Lot L	Section 18	Township 29N	Range 05W	Lot Idn	Feet From 2460	N/S Line S	Feet From 1050	E/W Line W	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 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

**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: *Tammy Jones*

Title: Operations/Regulatory Technician - Sr.

Date: 5/17/2018

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 C. Edwards

Date of Survey: 9/13/2004

Certificate Number: 15269

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

District II
PO Drawer DD, 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 30039-29335		*Pool Code 72319 \ 71599	*Pool Name BLANCO MESAVERDE \ BASIN DAKOTA
*Property Code 31325	*Property Name SAN JUAN 29-5 UNIT		*Well Number 55F
*GRID No. 217817	*Operator Name CONOCOPHILLIPS COMPANY		*Elevation 6598'

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
L	18	29N	5W		2460	SOUTH	1050	WEST	RIO ARriba

11 Bottom Hole Location If Different From Surface

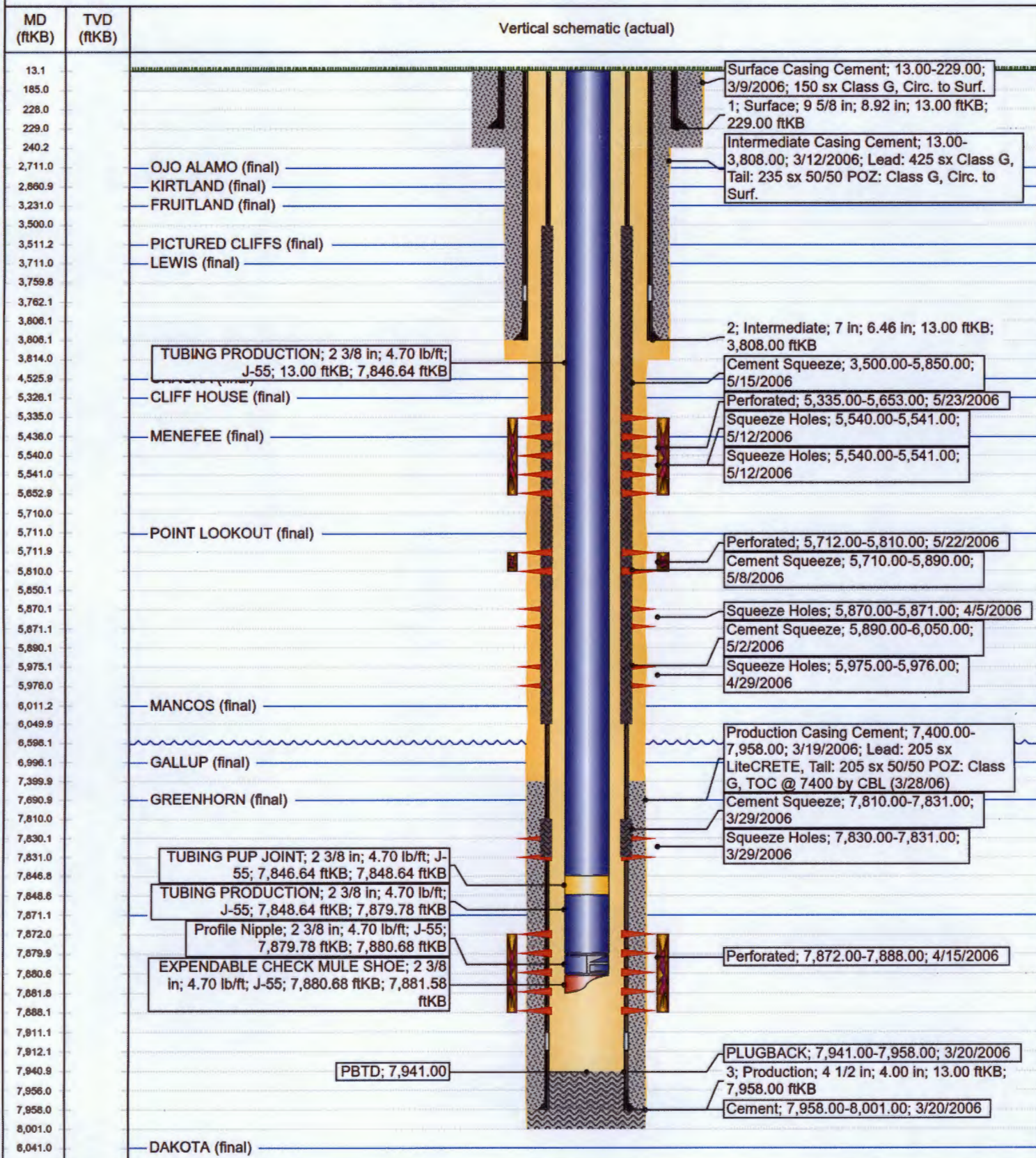
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 320.0 Acres - W/2 (MV) 320.0 Acres - W/2 (DK)					13 Joint or Infill		14 Consolidation Code		15 Order No.

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>15</p> <p>5280.00'</p> <p>1050'</p> <p>2460'</p> <p>5280.00'</p> <p>18</p> <p>5280.00'</p> <p>LEASE SF-078277</p> <p>LAT: 36°43.5098' N LONG: 107°24.2158' W DATUM: NAD27</p> <p>JAN 2005 RECEIVED OIL CON. DIV. DIST. 9</p>	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Vicki Westby (pf)</i> Signature Vicki R. Westby Printed Name Sr. Analyst Title 11/3/04 Date</p>
	<p>18 SURVEYOR CERTIFICATION</p> <p>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</p> <p>Survey Date: SEPTEMBER 13, 2004</p> <p>Signature and Seal of Professional Surveyor</p> <p> JASON C. EDWARDS Certificate Number 15269</p>

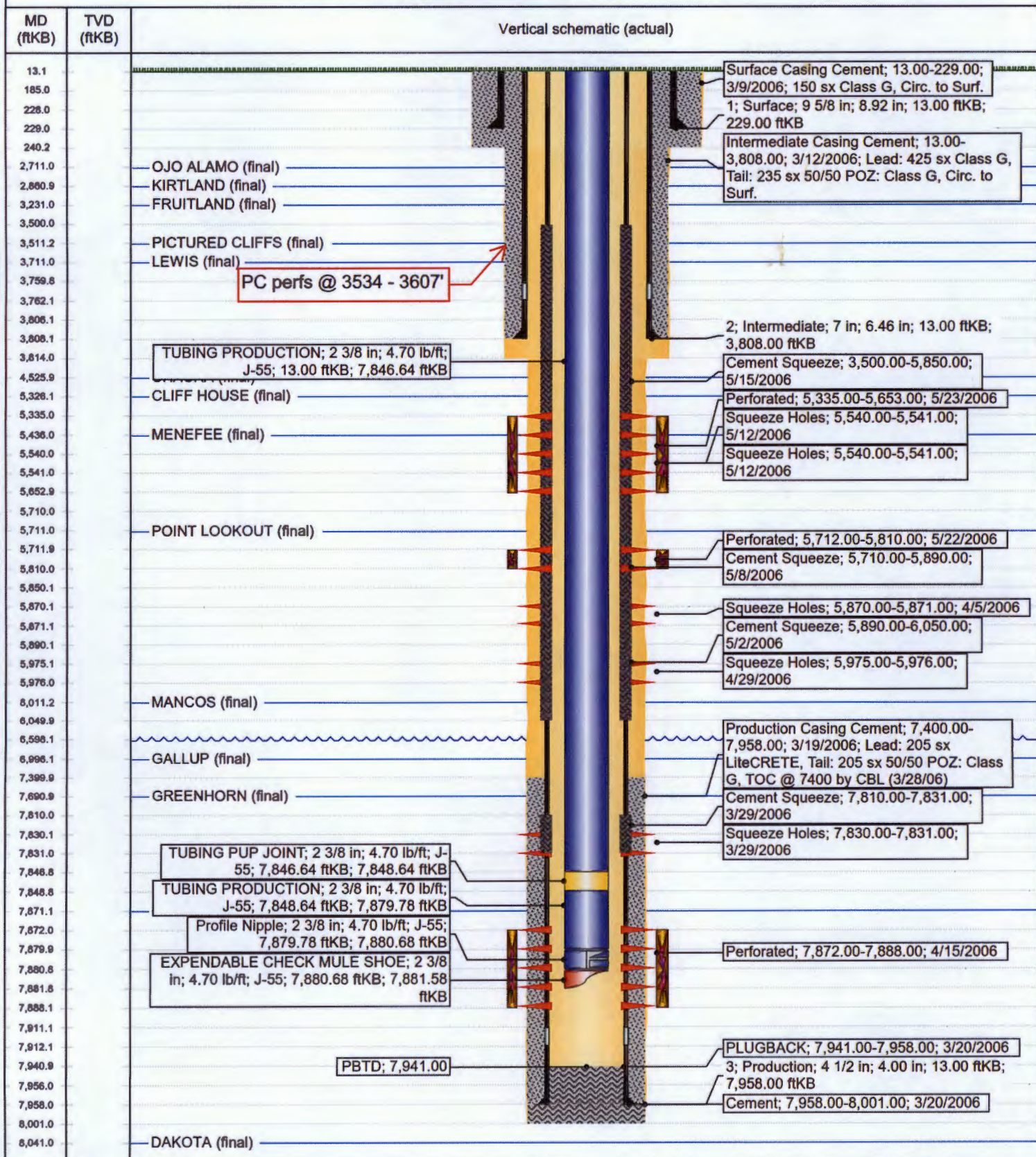
Well Name: SAN JUAN 29-5 UNIT #55F

API / UWI 3003929335	Surface Legal Location 018-029N-005W-L	Field Name MV/DK COM	Route 1205	State/Province NEW MEXICO	Well Configuration Type Vertical
Ground Elevation (ft) 6,598.00	Original KB/RT Elevation (ft) 6,611.00	KB-Ground Distance (ft) 13.00	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

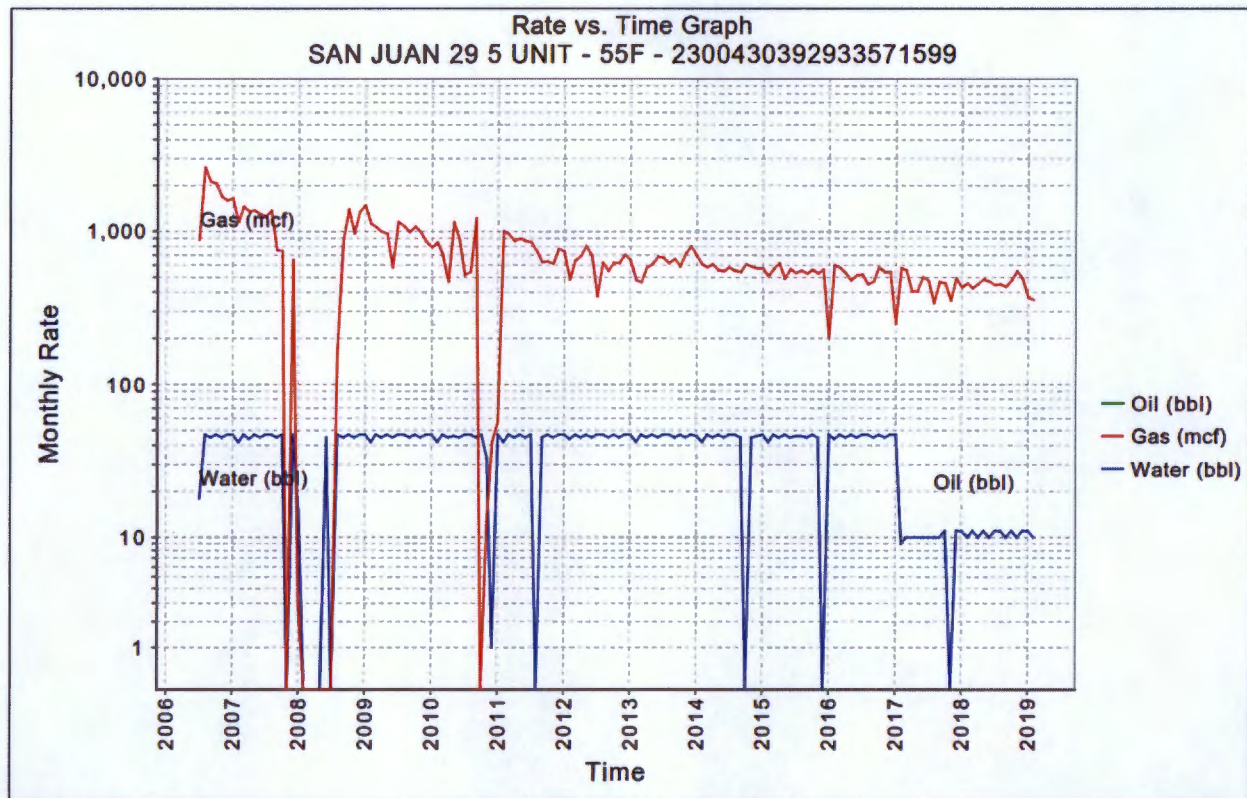
Vertical, Original Hole, 5/22/2019 7:28:26 AM


Well Name: SAN JUAN 29-5 UNIT #55F

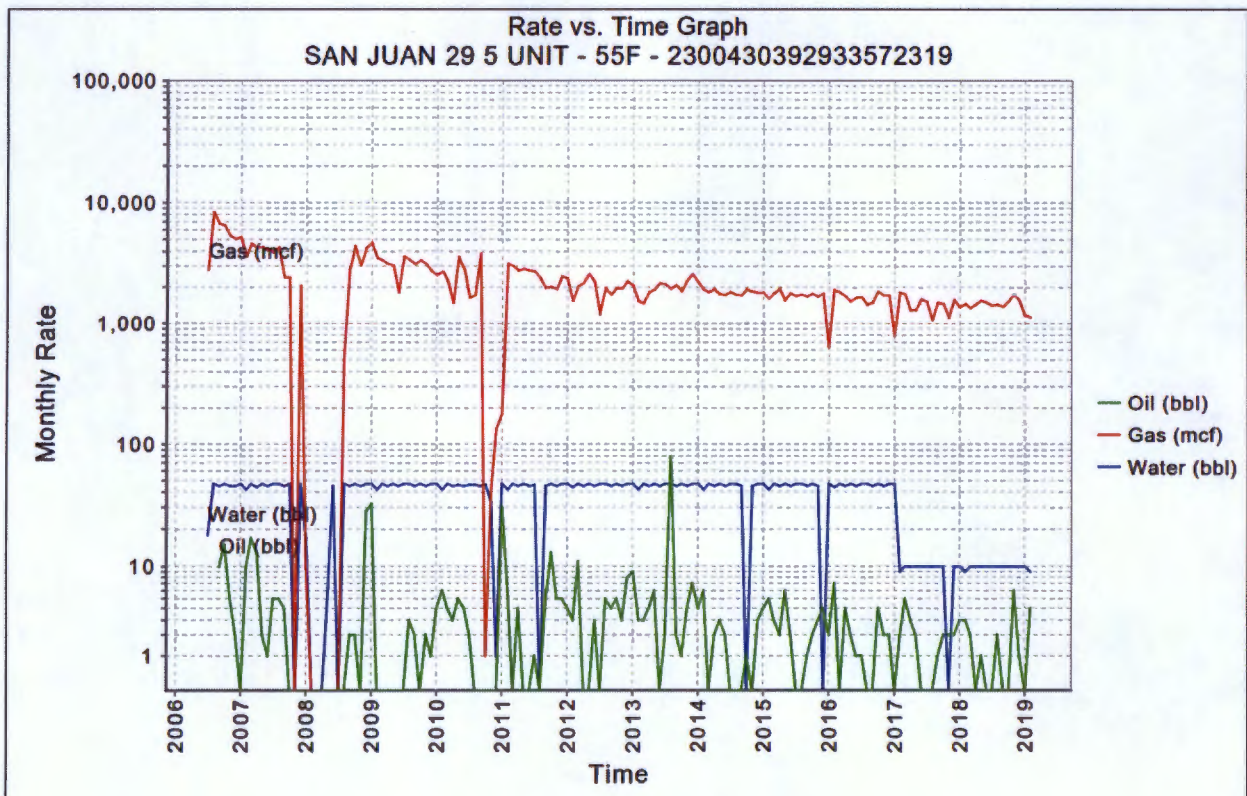
API / UWI 3003929335	Surface Legal Location 018-029N-005W-L	Field Name MV/DK COM	Route 1205	State/Province NEW MEXICO	Well Configuration Type Vertical
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Vertical, Original Hole, 5/22/2019 7:28:26 AM


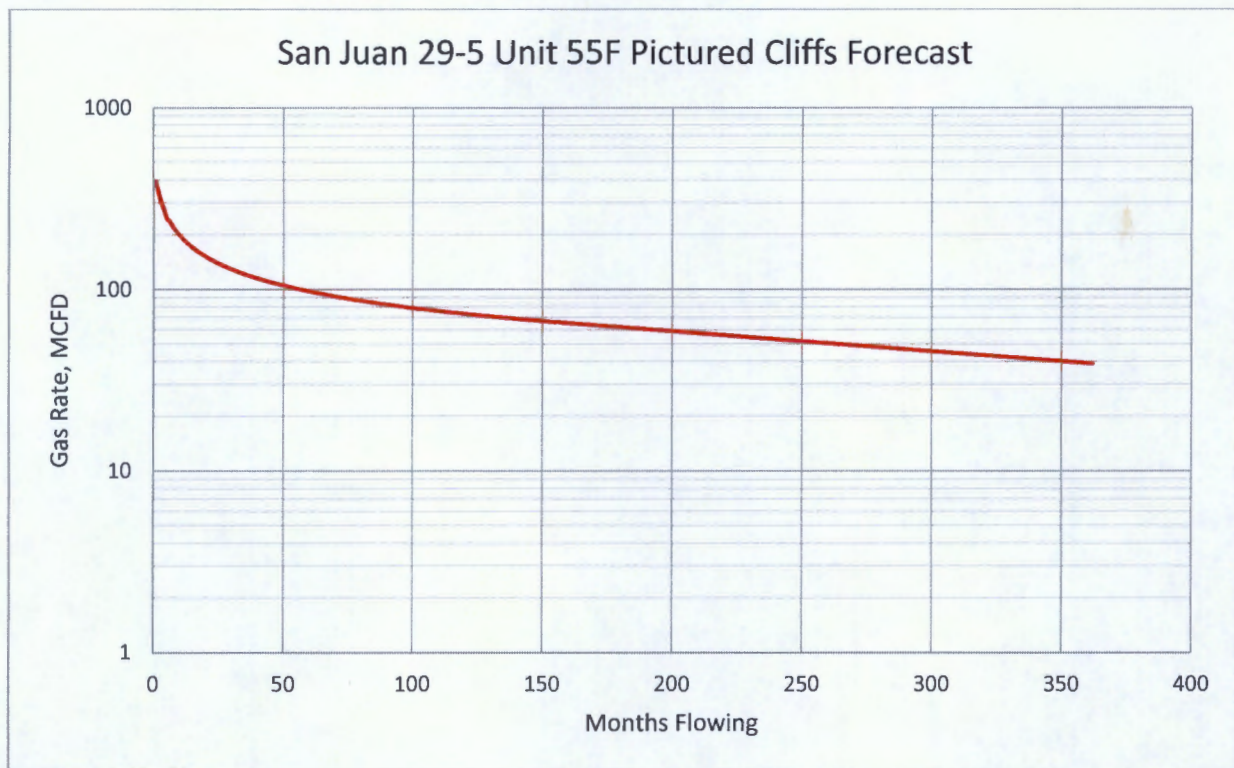
SAN JUAN 29-5 UNIT 55F – HISTORICAL DAKOTA PRODUCTION:



SAN JUAN 29-5 UNIT 55F – HISTORICAL MESAVERDE PRODUCTION:

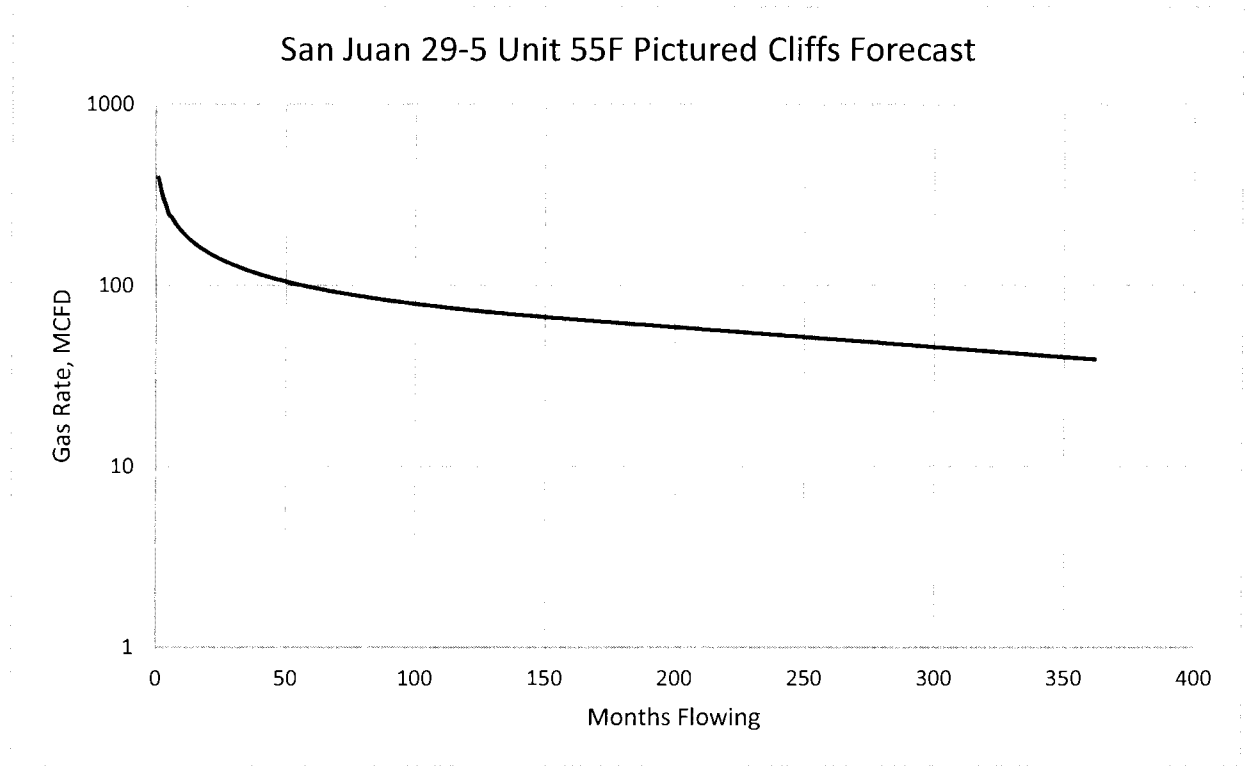


SAN JUAN 29-5 UNIT 55F – PICTURED CLIFFS PRODUCTION FORECAST



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 55F – 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 55F – 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.

Discussion of Pressures

Well Name	API	Existing Completion	Measurement		Casing Fluid
		Zones (Perfs)	Date	SITP/SICP (psia)	Level (ft)
San Juan 29-5 Unit 55F	300392933500	Mesaverde (5335-5810')			
		Dakota (7872-7888')	5/29/2019	124/122	7888'

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.

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

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

WELL API NO.	30-039-29335
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name SAN JUAN 29-5 UNIT	
8. Well Number	55F
9. OGRID Number	217817
10. Pool name or Wildcat BLANCO MESAVERDE / BASIN DAKOTA	

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 <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	
2. Name of Operator CONOCOPHILLIPS CO.	
3. Address of Operator P.O. BOX 2197 WL3 6108 HOUSTON, TX 77252	
4. Well Location Unit Letter <u>L</u> : <u>2460</u> feet from the <u>SOUTH</u> line and <u>1050</u> feet from the <u>WEST</u> line Section <u>18</u> Township <u>29N</u> Range <u>5W</u> NMPM County <u>RIO ARRIBA</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6598	
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>	
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____	
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____	

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"/>	
OTHER: DHC <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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

In reference to Order #R-11363 ConocoPhillips proposes to downhole commingle in the Blanco Mesaverde and Basin Dakota

Perforations are:
Blanco Mesaverde 5326 - 5943
Basin Dakota 7871 - 8041

Allocation will be by test.

Commingling in this well will not reduce the value of the remaining production.

BLM has been notified of our intent.

In reference to Order #R-10770 interest owners were not notified.



DHC 1792AZ

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Deborah Marberry TITLE REGULATORY ANALYST DATE 02/28/2005

Type or print name DEBORAH MARBERRY E-mail address: deborah.marberry@conocophillips.com Telephone No. (832)486-2326

For State Use Only

DEPUTY OIL & GAS INSPECTOR, DIST. #

MAR - 3 2005

APPROVED BY: [Signature] TITLE _____ DATE _____

Conditions of Approval (if any):

Allocation for the San Juan 29-5 #55F - API 30-039-29335

The San Juan 29-5 #55F is an 80-acre Mesaverde/80-acre Dakota infill well located in the southwest quarter of Section 18-T29N-R5W, Rio Arriba County, NM. The well was TD'd in March 2006, perforated and fracture stimulated in May 2006, and ready for first delivery on June 16, 2006.

Initial flow tests as reported by the field operator indicated:

Mesaverde (2-3/8" tubing set at 5,770', perforations from 5,335 - 5,810' OA, CBP at 5,850')
6/07/06 1/2" choke 100 psi ftp 250 psi sicp 660 Mcfgd + 0.5 Bopd + 2 Bwd

Dakota (2-3/8" tubing set at 7,739', perforations from 7,872 - 7,888' OA, TD 8,000', multi-pass production log)
6/16/06 1/2" choke 45 psi ftp 310 psi sicp 206* Mcfgd + 0 Bopd + 3.4 Bwd

Based on these initial stabilized flow tests, calculated DHC allocation percentages are:

Fixed Allocation (Gas)	Mesaverde	76%
	Dakota	24%

Fixed Allocation (Oil)	Mesaverde	100%
	Dakota	0%

Little oil was produced during these tests. Based on historical production data from offset wells, the Dakota is very dry and is expected to produce no oil. Therefore, 100% of any oil production should be allocated to the Mesaverde.

Please allocate production based on the above estimated percentages and call with any questions.

Thanks

Tom Johnson
832-486-2347

* Rate measured with a production log, making multiple passes at varying speeds. Casing was shut-in with all production directed up tubing. Tubing set ~100' above the top Dakota perforation makes it possible to gauge a Dakota rate isolated from any Mesaverde influence (log run below the point where the shallower Mesaverde has already turned the corner and is going up tubing).