

Fe
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

CONOCO INC.

3. Address and Telephone No.

10 DESTA DR. STE. 100W, MIDLAND, TX. 79705-4500 (915) 686-5424

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

Section 31, T-26-N, R-3-W, H
1850' FNL & 825' FELL

FORM APPROVED

Budget Bureau No. 1004-0135

Expires: March 31, 1993

5. Lease Designation and Serial No.

CONT 100

6. If Indian, Allottee or Tribe Name

Jicarilla

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Jicarilla D Well # 10

9. API Well No.

30-030-08100

10. Field and Well Production Office

Tapacito Pictured Cliffs,
Blanco Mesaverde

11. County or Parish, State

Rio Arriba

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Repon
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other Downhole Commingle

- ☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracrunng
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Repon results of multiple completion Wdl Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to Downhole Commingle the Blanco Mesaverde and the Tapacito Pictured Cliffs in this well

RECEIVED
FEB 25 1993

OIL CON. DIV.
DIST. 3

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

Signed

Kay Maddox

Kay Maddox

Title Regulatory Agent

Date

12/10/97

(This space for Federal or State office use)

Approved by

David R. Selt

Title

Land and Mineral Resources

Date

FEB 23 1998

BLM(6), NMOCD(1), SHEAR, PONCA, COST ASST, FILE ROOM

Title 18 U.S.C. Section 1001, makes 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.

*See Instruction on Reverse Side

DISTRICT I

Box 1980, Hobbs, NM 88241 1980

DISTRICT II

811 South First St. Artesia NM 88210 2835

DISTRICT III

1000 Rio Brazos Rd. Aztec, NM 87410 1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429Form C-107-A
New 3-12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Conoco Inc.

10 Desta Dr. Ste 100W, Midland, Tx. 79705-4500

Jicarilla D

10

Section 31, T-26-N, R-3-W, H

Rio Arriba

Lease

Well No

Unit Ltr Sec Twp Rge

County

OGRID NO. 005073

Property Code

18021

API NO.

30-039-08100

Spacing Unit Lease Types: (check 1 or more)

Federal ☒ , State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Tapacito Pictured Cliffs 85920		Blanco Mesaverde 72319
2. TOP and Bottom of Pay Section (Perforations)	3863-3890'		5934-6135' OA
3. Type of production (Oil or Gas)	Gas		
4. Method of Production (Flowing or Artificial Lift)	Flowing		To be Completed
5. Bottomhole Pressure	a (Current)	a.	a.
Oil Zones - Artificial Lift: Estimated Current	352		704
Gas & Oil - Flowing: Measured Current	b (Original)	b.	b.
All Gas Zones: Estimated Or Measured Original	1178		1365
6. Oil Gravity (*API) or Gas BT Content	1253		1251
7. Producing or Shut-In?	Producing		To be Completed
Production Marginal? (yes or no)	Yes		Expected to be
• If Shut-In give date and oil/gas/ water rates of last production	Date Rates	Date Rates	Date Rates
Note For new zones with no production history applicant shall be required to attach production estimates and supporting data			
• If Producing, date and oil/gas/ water rates of recent test (within 60 days)	Date Rates EST 2/98 22 MCFD, 0 BOPD, 0 BWPD	Date Rates	Date Rates EST 2/98 280 MCFD, 1 BOPD, 0 BWPD
8. Fixed Percentage Allocation Formula - % for each zone	oil: % Gas %	oil: % Gas %	oil: % Gas %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones?

If not, have all working, overriding, and royalty interests been notified by certified mail?

Have all offset operators been given written notice of the proposed downhole commingling?

X Yes ___ No
X Yes ___ No
X Yes ___ No11. Will cross-flow occur? ☒ Yes ___ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☒ Yes ___ No (If No, attach explanation)12. Are all produced fluids from all commingled zones compatible with each others ☒ Yes ___ No13. Will the value of production be decreased by commingling? ___ Yes ☒ No (If Yes, attach explanation)14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ___ No

15. NMOCD Reference Cases for Rule 303(D) Exceptions:

ORDER NO(S).

16. 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 all offset operators.
- * Notification list of working, overriding and royalty interests for uncommon interest cases.
- * Any additional statements, data, or documents required to support commingling.

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

SIGNATURE

Kay Maddox

TITLE Regulatory Agent

DATE

12/10/97

TYPE OR PRINT NAME

Kay Maddox

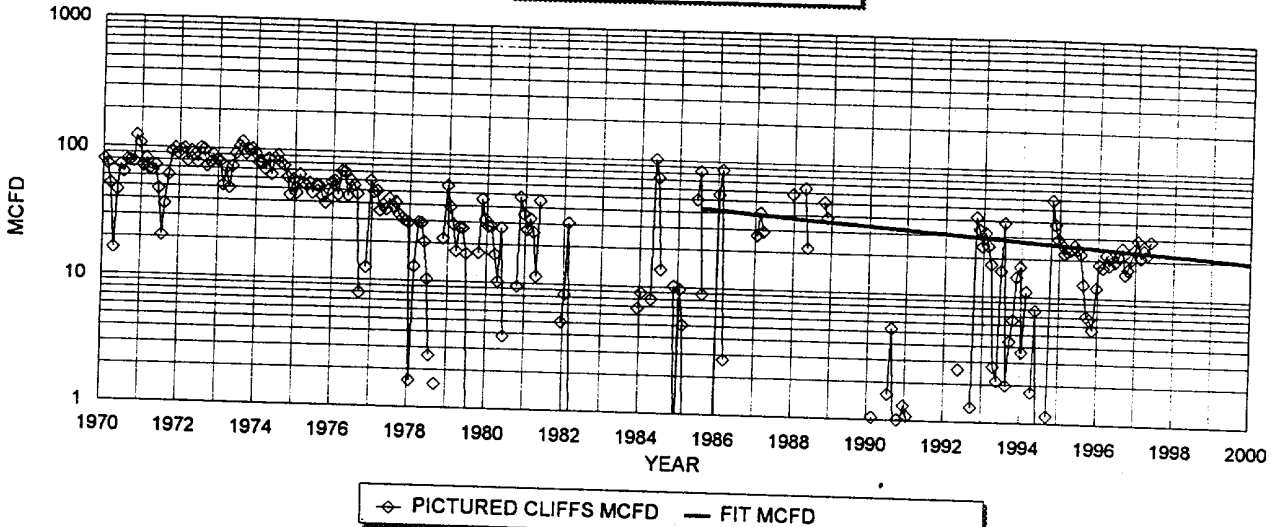
TELEPHONE NO.

(915)

686-5798

100-443887-100

JICARILLA D 10 PICTURED CLIFFS
SECTION 31H-26N-03W

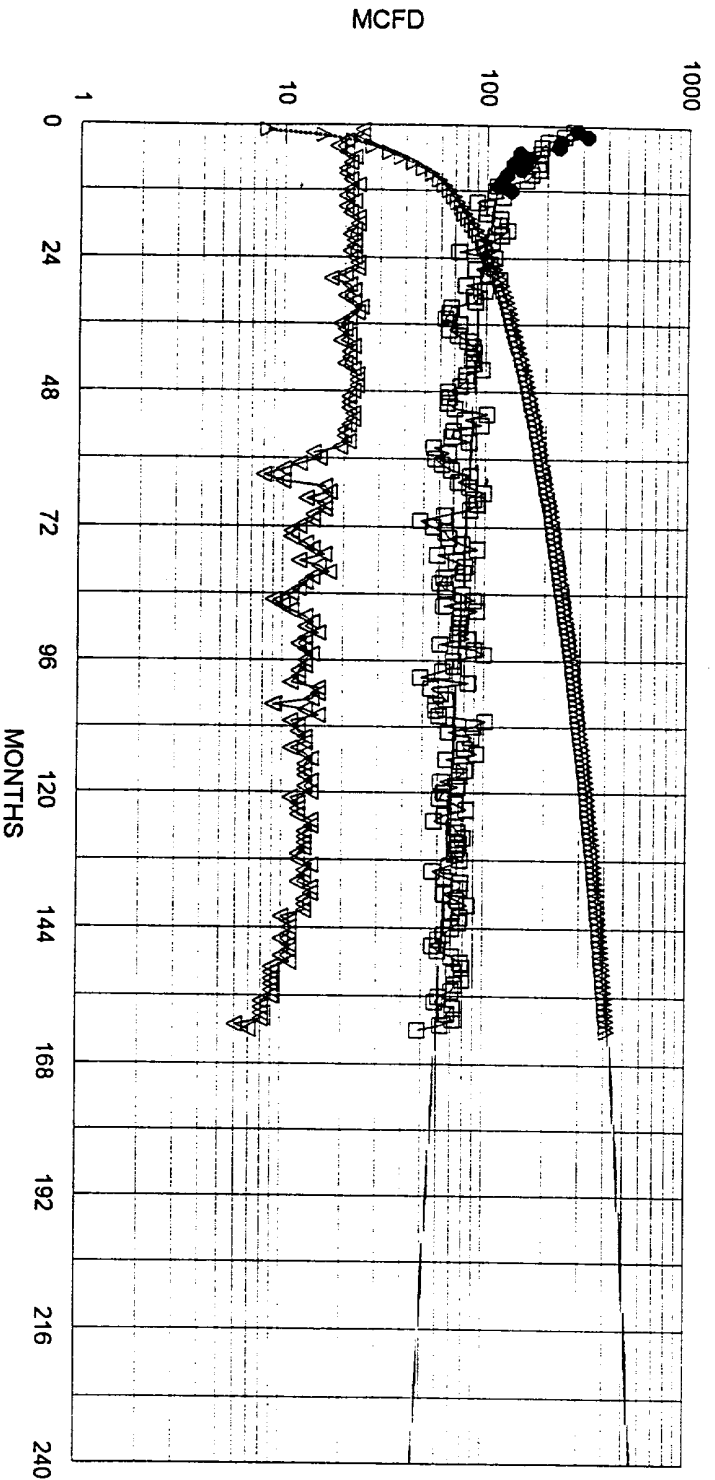


HISTORICAL DATA:		1ST PROD: 12/66	PROJECTED DATA	
OIL CUM:	0.00	MBO	2/1/98 Q1:	22 MCDF
GAS CUM:	372	MMCF	DECLINE RATE:	5.1% (EXPONENTIAL)
CUM OIL YIELD	0.0000	BBL/MCF		
OIL YIELD:	0.0000 BBL/MCF, LAST 3 YRS			
AVG. USED:	0.0000 BBL/MCF			

YEAR	MID-YEAR	MID-YEAR
	AVG. MCFD	AVG. BOPD
1998	22.2	0.0
1999	21.5	0.0
2000	20.4	0.0
2001	19.4	0.0
2002	18.4	0.0
2003	17.4	0.0
2004	16.5	0.0
2005	15.7	0.0
2006	14.9	0.0
2007	14.1	0.0
2008	13.4	0.0
2009	12.7	0.0
2010	12.1	0.0
2011	11.5	0.0
2012	10.9	0.0
2013	10.3	0.0
2014	9.8	0.0
2015	9.3	0.0
2016	8.8	0.0
2017	8.4	0.0
2018	8.0	0.0
2019	7.5	0.0
2020	7.2	0.0
2021	6.8	0.0
2022	6.5	0.0
2023	6.1	0.0
2024	5.8	0.0
2025	5.5	0.0
2026	5.2	0.0
2027	5.0	0.0

PRODUCTION FORECAST FOR SUBTRACTION METHOD COMMINGLE ALLOCATION

NORMALIZED MESAVERDE PRODUCTION
25 WELLS SINCE 1980: 26N 4W SEC 7-36



— FIT MCFD □ NORMALIZED MCFD Δ NORM CUM MMCF
▽ WELLS ON PRODUCTION — FIT CUM MMCF ◆ 7 NEW MERIT REC. SINCE '94

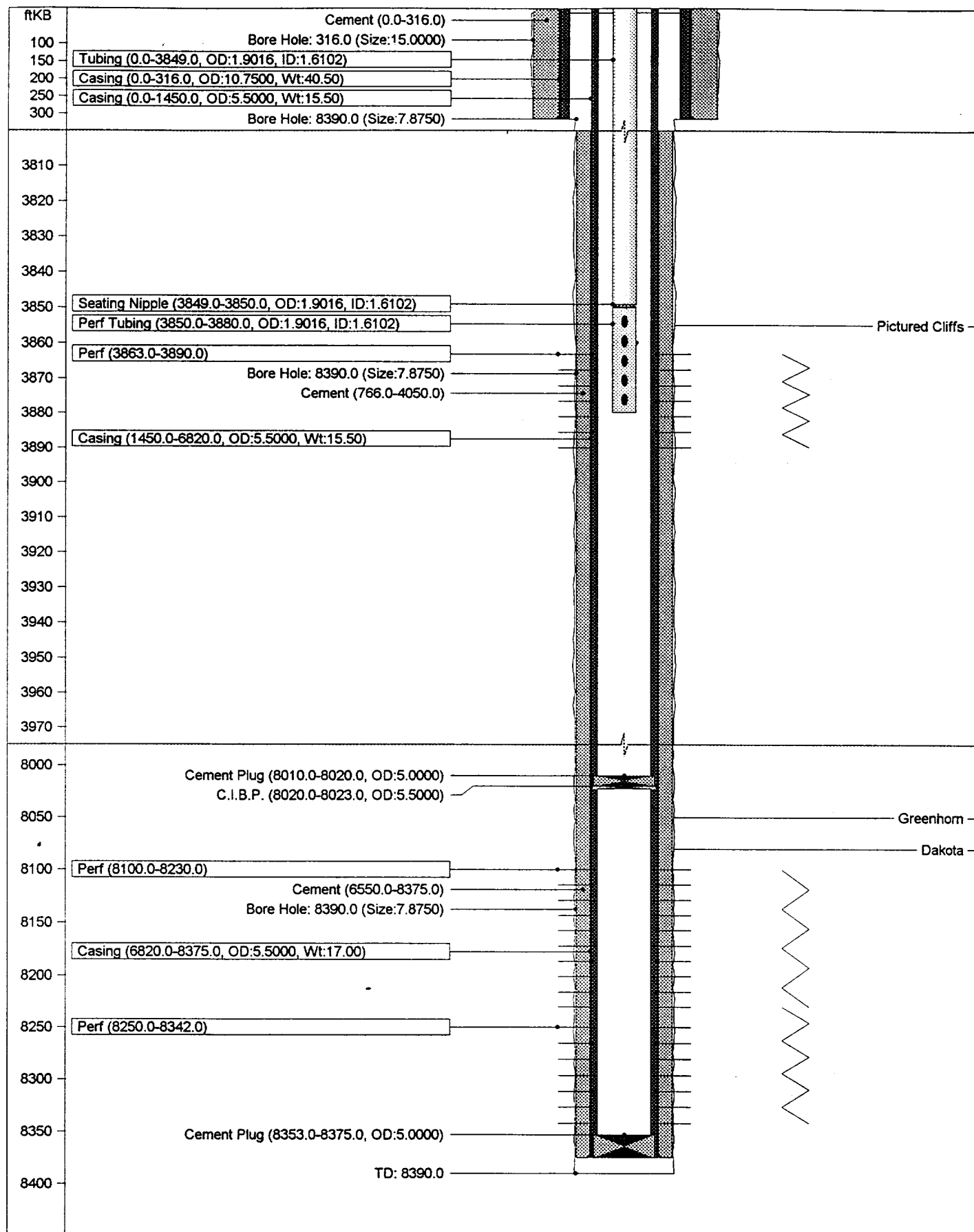
NORMALIZED AVG:

777 MMCF EUR
549 MMCF IN 20 YRS
20 MCFD E.L.
0.004 BBL/MCF OIL YIELD

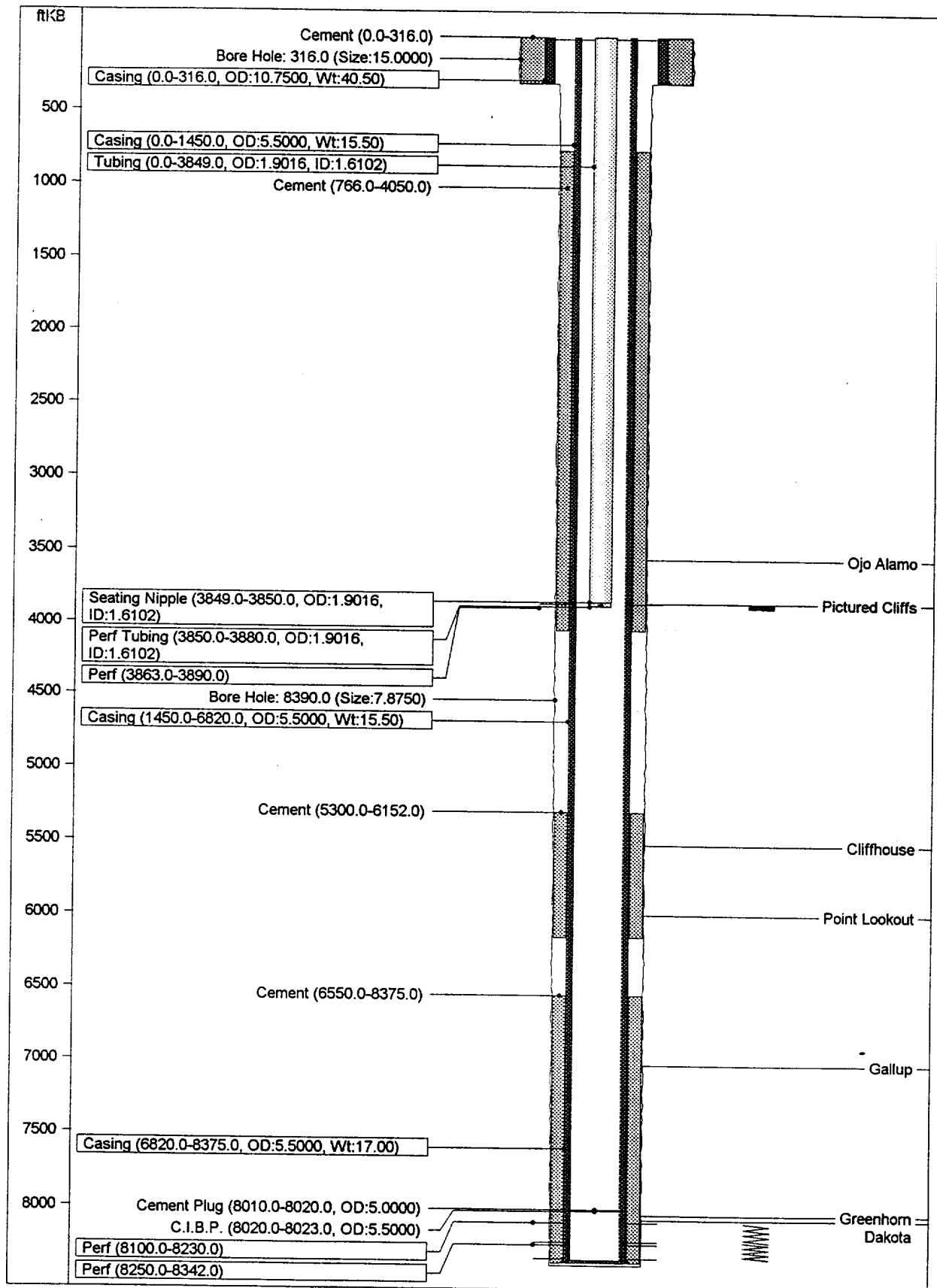
280 MCFD IP
60% DECLINE, 1ST 12 MONTHS
15% DECLINE, NEXT 12 MONTHS
4.0% FINAL DECLINE

Similar performance expected in 16.D10; 31-26-3

JICARILLA D 10 (LFW 10/7/97)



JICARILLA D 10 (LFW 10/7/97)



JICARILLA D 10 (LFW 10/7/97)

JICARILLA D 10 (LFW 10/7/97)							
API Code	300390810000	Field Code	676398740				
TD	8390.0 ftKB	Basin	SAN JUAN BASIN				
PBTD	8010.0 ftKB	Basin Code	580				
State	New Mexico	Permit	17-Sep-66				
County	Rio Arriba	Spud	17-Sep-66				
District	San Juan O.U.	Finish Drl	21-Oct-66				
Permit No.		Completion	07-Nov-66				
TD Measured	8390	Abandon					
Reservoir	Pictured Cliffs						
Field	TAPACITO PC						
Location							
Meridian	NM	Top Latitude	36.36844				
Twntship	26N	Top Longitude	107.2879				
Range	3W	Top NS Distance	1850.0 ft N				
Section	31	Top EW Distance	825.0 ft E				
Quarter	NE SE	Bottom Latitude	0				
		Bottom Longitude	0				
		Btm NS Distance	0.0 ft				
		Btm EW Distance	0.0 ft				
Elevations							
KB	7258.0 ft	Cas Fing	0.0 ft				
Grd	7246.0 ft	Tub Head	0.0 ft				
KB-Grd	12.0 ft						
Bore Hole Data							
	Depth (ftKB)		Size (in)				
	316.0		15.0000				
	8390.0		7.8750				
Casing String - Surface Casing							
Item (in)	Btm (ftKB)	Jnts	ID	Wt	Grd	Thd	Comments
10.7500 in Casing	316.0	10	10.0500	40.50	H-40	ST&C	
Casing String - Production Casing							
Item (in)	Btm (ftKB)	Jnts	ID	Wt	Grd	Thd	Comments
5.5000 in Casing	1450.0	45	4.9500	15.50	J-55	LT&C	
5.5000 in Casing	6820.0	167	4.9500	15.50	J-55	ST&C	
5.5000 in Casing	8375.0	48	4.8900	17.00	J-55	ST&C	
Casing Cement							
Casing String	Top (ftKB)	Amount (sx)	Comments				
Surface Casing	0.0	300	Cement circ				
Production Casing	766.0	467	TOC by est DV @ 3998'				
Production Casing	5300.0	333	TOC by est DV @ 6152'				
Production Casing	6550.0	333	TOC by est				
Other (plugs, equip., etc.) - Plug Backs							
Date	Item		Int (ftKB)	Comments			
06-Nov-66	Cement Plug		8010.0 - 8020.0				
06-Nov-66	C.I.B.P.		8020.0 - 8023.0	5 1/2" Baker Perm Model "N" BP. Isolate Dakota Interval			
28-Oct-66	Cement Plug		8353.0 - 8375.0				
Perforations							
Date	Int	Shots (/ft)	Comments				
29-Oct-66	8250.0 - 8342.0	2.0	@ 8250-62', 8268-76', 8332-42'.				
30-Oct-66	8100.0 - 8230.0	2.0	@ 8100-07', 8110-18', 8212-21', 8225-8230'.				
31-Oct-66	3863.0 - 3890.0	1.0					
Stimulations & Treatments							
Date	Type	Zone	Int	Fluid	Comments		
29-Oct-66	Fracture	Lwr Dakota	8230.0 - 8342.0	Water	Spearhead w/ 500 G 7 1/2% HCL. Frac w/ 53,130 G 0.8% KCL w/ add. + 40,000# 20/40 + 10,000# 10/20 sd. AIR= 57 bpm @ 3300#. ISIP 2200#		
30-Oct-66	Fracture	Upr Dakota	8100.0 - 8230.0	Water	Spearhead w/ 500 G 7 1/2% HCL. Frac w/ 56,070 G 0.8% KCL w/ add. + 30,000# 20/40 + 20,000# 10/20 sd. AIR= 54 bpm @ 2800#. ISIP 2100#		
01-Nov-66	Fracture	Pictured Cliffs	3863.0 - 3890.0	Water	Frac w/ 35,742 G 0.8% KCL + 50,000# 10/20 sd. AIR= 68 bpm @ 1500#. ISIP 100#		

JICARILLA D 10 (LFW 10/7/97)

Tubing String - Primary Tubing								
Item (in)	Top (ftKB)	Len (ft)	Jnts	ID (in)	Wt	Grd	Thd	Comments
1.9016 in Tubing	0.0	3849.0	118	1.6102	2.76	JCW		4/22/94: W/O showed 1 1/2" tbg POOH, Run Hot Oilier, no information on tbg RIH, assuming same string was RIH.
1.9016 in Seating Nipple	3849.0	1.0		1.6102	0.00	JCW		
1.9016 in Perf Tubing	3850.0	30.0	1	1.6102	2.76	JCW		Land @ 3880'
Formation/Horizon Tops								
Top (ftKB)		Formation						
3555.0		Ojo Alamo						
3855.0		Pictured Cliffs						
5520.0		Cliffhouse						
5997.0		Point Lookout						
7029.0		Gallup						
8050.0		Greenhorn						
8080.0		Dakota						
Logs Run								
Date	Type	Int	Company	Comments				
19-Oct-66	IND	312.0 - 3348.0	Schlumberger					
20-Oct-66	DEN	3750.0 - 8347.0	Schlumberger					
28-Oct-66	GR-CBL	2700.0 - 8351.0	PGAS					
General Notes								
Date	Note							
14-Nov-66	Initial Potential: PC F 1500 MCFPD on 3/4" choke, CAO F 2525 MCFPD TP 117 CP 386 SICP 576							

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

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 30-039-08100		2 Pool Code 72319	3 Pool Name Blanco Mesaverde
4 Property Code 18021	5 Property Name Jicarilla D		6 Well Number #10
7 OGRID No. 005073	8 Operator Name Conoco Inc., 10 Desta Drive, Ste. 100W, Midland, TX 79705-4500		9 Elevation 7225' GL

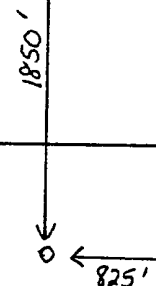
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	31	26N	3W		1850	North	825	East	Rio Arriba

11 Bottom Hole Location If Different From Surface

If Bottom Hole Location is 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	13 Joint or Infill	14 Consolidation Code		15 Order No.					
320									

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

16			17 OPERATOR CERTIFICATION	
			I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief	
			Signature <u>Kay Maddox</u>	
			Printed Name <u>Kay Maddox</u>	
			Title <u>Regulatory Agent</u>	
			Date <u>Dec 9, 1997</u>	
			18 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.	
			Date of Survey _____	
			Signature and Seal of Professional Surveyor: _____	
			Certificate Number _____	

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACERAGE DEDICATION PLAT**

All distances must be from the outer boundaries of the Section

Operator SOUTHERN UNION PRODUCTION COMPANY				Lease JICARILLA "D"		Well No 10	
Unit Letter H	Section 31	Township 26 NORTH	Range 3 WEST	County RIO ARriba			
Actual Footage Location of Well: 1850 feet from the NORTH line and 825 feet from the EAST line							
Ground Level Elev 7225.0	Producing Formation Dakota Pictured Cliffs		Pool Basin Dakota Tapacito Pictured Cliffs	Dedicated Acreage 180		Acres 160	

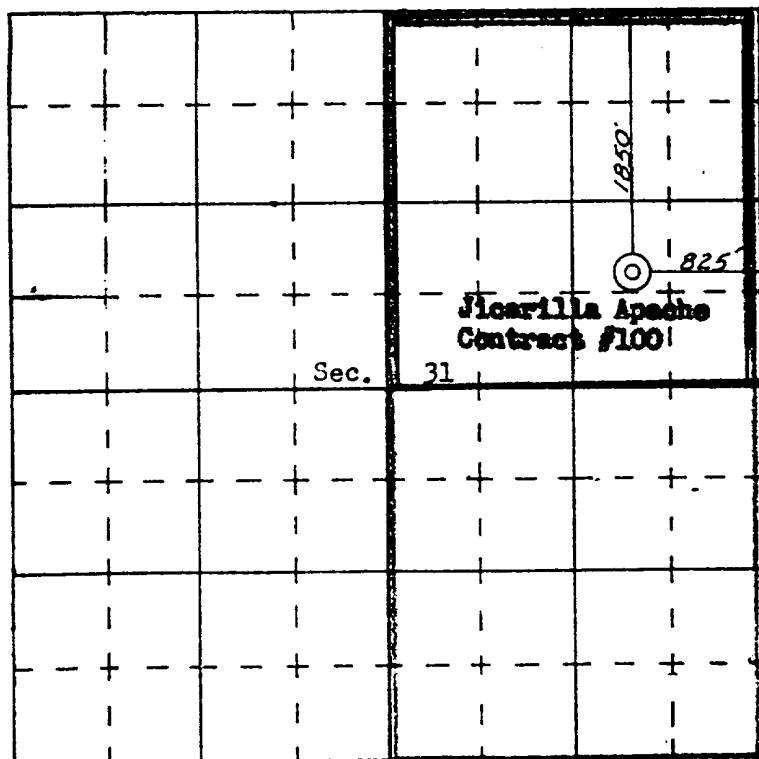
1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is 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 Communitization

If answer is "no," list the owners and tract descriptions which have actually 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.

—— **Dakota Dedicated Acreage**
 —— **Pictured Cliff Dedicated Acreage**



SCALE—4 INCHES EQUALS 1 MILE

SAN JUAN ENGINEERING COMPANY, FARMINGTON, N. M.

CERTIFICATION

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

Original signed by
GILBERT D. NOLAND, JR.

Name

Gilbert D. Noland, Jr.

Position

Drilling Superintendent

Company

Southern Union Production Co.

Date

September 13, 1966

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.

September 13, 1966

Date Signed

Registered Professional Engineer
or Field Supervisor

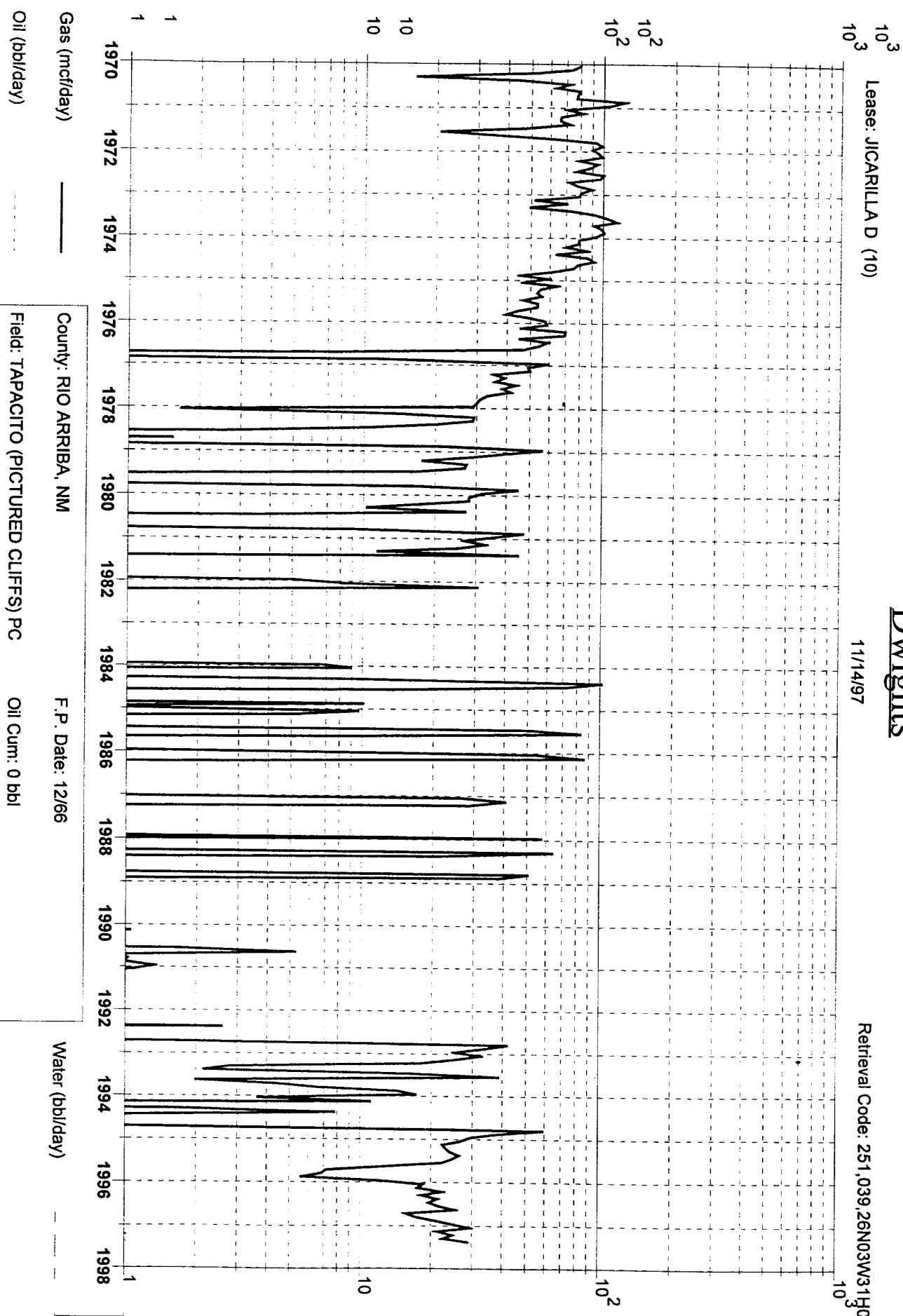
Certificate No.

Dwights

Lease: JICARILLA D (10)

11/14/97

Retrieval Code: 251,039,26N03W31H00PC



County: RIO ARriba, NM F.P. Date: 12/66

Field: TAPACITO (PICTURED CLIFFS) PC Oil Cum: 0 bbl

Reservoir: PICTURED CLIFFS Gas Cum: 372.4 mmcf

Operator: CONOCO INC Location: 31H 26N 3W

Conoco, Inc.
Jicarilla D #10
Section 31, T-26-N, R-3-W, H
Rio Arriba County, New Mexico

Re: Application for Downhole Commingling

Offset Operators:

Burlington Resources
PO Box 4289
Farmington, New Mexico 87499

Dugan Production Corp.
PO Box 420
Farmington, New Mexico 87499-0420

Beartooth Oil & Gas Co
PO Box 2564
Billings, Montana 59103

John E. Schalk
PO Box 25825
Albuquerque, New Mexico 87125

Minel Inc
309 Washington SE
Albuquerque, New Mexico 87108

Jicarilla D No. 10

Downhole Commingling Justification

The royalty interests of the Jicarilla Tribe in all leases operated by Conoco are identical across all producing formations and will in no way be affected by the commingling process or the allocation of production to the various pools. The production and revenue benefits to be gained through downhole commingling will be equally realized by Conoco and the Jicarilla Tribe. This is specifically true of the Jicarilla D No. 10 well which will benefit as described in the following justification.

The goal of any prudent operator, to the benefit of all interest owners, is to develop and produce the maximum volume of hydrocarbons in the most efficient manner and with the minimum costs possible. Downhole commingling of San Juan Basin gas wells provides several significant benefits to all of the interest owners involved in those wells such as:

1. More efficient rate of recovery
2. Greater ultimate recovery
3. Less expensive maintenance and operation
4. Development of otherwise uneconomical reserves

The continued production of multiple gas pools from the same wellbore in most San Juan Basin wells is inherently inefficient and not only results in restricted producing rates, but reduces their ultimate recovery. Separately producing multiple gas pools is currently accomplished either by using multiple tubing strings or by producing one zone up the casing behind a single tubing string.

One of the major problems associated with such operational schemes is related to the production of fluids (oil, condensate and/or water). Efficient recovery mandates that these fluids be continuously lifted to keep the wells from loading up and either killing the wells or severely restricting their flow rates. However, another major problem is associated with the fact that most of the gas pools in the San Juan Basin, and especially the large Mesaverde and Dakota pools, are largely depleted and are down to very low reservoir pressures as a recovery mechanism. Therefore, most of these wells do not have sufficient remaining reservoir energy to adequately lift these fluids and maintain efficient flow.

With low reservoir pressures, the only way to keep these wells unloaded and producing efficiently is to pump these fluids either by beam pump or downhole plungers. The major impediment to resolving this problem lies in the fact that these wells are typically completed with either 4 1/2" to 5 1/2" production casing. This restricts the size of tubing that can be utilized for multiple zones. Many of the tubing strings are only 1 1/16" and will not accommodate plunger installation. Plunger lift becomes increasingly less efficient in smaller than 2 3/8" tubing.

Through the use of plunger lift operations, to keep these low pressure wells unloaded, Conoco has experienced dramatic increases in production. Such increases in producing efficiency will result not only in higher current rates but will promote greater ultimate recoveries. However, these significant improvements in production cannot be accomplished in wells with small multiple tubing strings or with dualled production up the casing.

Downhole commingling to increase efficiency, development, and ultimate recovery from these mature gas reservoirs is the most important basin activity to occur in several years. The major emphasis of downhole commingling is, after all, on increasing produced volumes. Through this procedure

1. Many shut-in and abandoned zones are being reactivated
2. Many low rate completions are being revitalized or even doubled in rate
3. Even higher rate wells are benefiting from rate and recovery increases
4. Many new wells are being drilled initially as downhole commingled wells that could not be economically developed otherwise.

As a side light to production advantages, there are numerous additional benefits to be realized from reduced operational costs and maintenance. Reducing these costs are not only for the benefit of the operator. This results in longer well life and higher margins of income for all interest owners. However, operational costs savings are secondary to the benefits of improved recovery and should not be the focus of this program.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Designation and Serial No. CONT 100
2. Name of Operator CONOCO INC.		6. If Indian, Allottee or Tribe Name Jicarilla
3. Address and Telephone No. 10 DESTA DR. STE. 100W, MIDLAND, TX. 79705-4500 (915) 686-5424		7. If Unit or CA, Agreement Designation
4. Location of Well (Footage, Sec., T. R. M. or Survey Description) Section 31, T-26-N, R-3-W, H 1850' FNL & 825' FELL		8. Well Name and No. Jicarilla D Well # 10
		9. API Well No. 30-038-08100
		10. Field Tapacito Pictured Cliffs, Blanco Mesaverde
		11. County or Parish, State Rio Arriba

CHECK APPROPRIATE BOX(s) 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"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Repon	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracrunng
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other Downhole Commingle	<input type="checkbox"/> Dispose Water

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to Downhole Commingle the Blanco Mesaverde and the Tapacito Pictured Cliffs in this well

RECEIVED
FEB 25 1998
OIL CON. DIV.
DIST. 3

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

Signed

Kay Maddox

Title **Regulatory Agent**

Date

12/10/97

(This space for Federal or State office use)

Approved by

Lands and Mineral Resources

Date

FEB 23 1998

Conditions of approval if any:

BLM(6), NMOCD(1), SHEAR, PONCA, COST ASST, FILE ROOM

Title 18 U.S.C. Section 1001, makes 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.

*See Instruction on Reverse Side

DISTRICT I

P.O. Box 1980, Hobbs, NM 88241 1980

DISTRICT II

611 South First St. Artesia NM 88210 2835

DISTRICT III

1000 Rio Brazos Rd. Aztec, NM 87410 1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429Form C-107-A
New 3-12-96

- APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Conoco Inc.

10 Desta Dr. Ste 100W, Midland, Tx. 79705-4500

Operator

Address

Jicarilla D

10

Section 31, T-26-N, R-3-W, H

Rio Arriba

Lease

Well No

Unit Ltr Sec Twp Rge

County

OGRID NO. 005073

Property Code

18021

API NO.

30-039-08100

Spacing Unit Lease Types: (check 1 or more)

Federal ☒ , State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Tapacito Pictured Cliffs 85920		Blanco Mesaverde 72319
2. TOP and Bottom of Pay Section (Perforations)	3863-3890'		5934-6135' OA
3. Type of production (Oil or Gas)	Gas		
4. Method of Production (Flowing or Artificial Lift)	Flowing		To be Completed
5. Bottomhole Pressure	a. (Current) 352	a. 704	a.
Oil Zones - Artificial Lift: Gas & Oil - Flowing: Estimated Current All Gas Zones: Measured Current Estimated Or Measured Original	b. (Original) 1178	b. 1365	b.
6. Oil Gravity (*API) or Gas BT Content	1253		1251
7. Producing or Shut-In?	Producing		To be Completed
Production Marginal? (yes or no)	Yes		Expected to be
• If Shut-In give 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 Rates	Date Rates
• If Producing, date and oil/gas/water rates of recent test (within 60 days)	Date Rates EST 2/98 22 MCFD, 0 BOPD, 0 BWPD	Date Rates EST 2/98 280 MCFD, 1 BOPD, 0 BWPD	Date Rates
8. Fixed Percentage Allocation Formula -% for each zone	oil: % Gas %	oil: % Gas %	oil: % Gas %

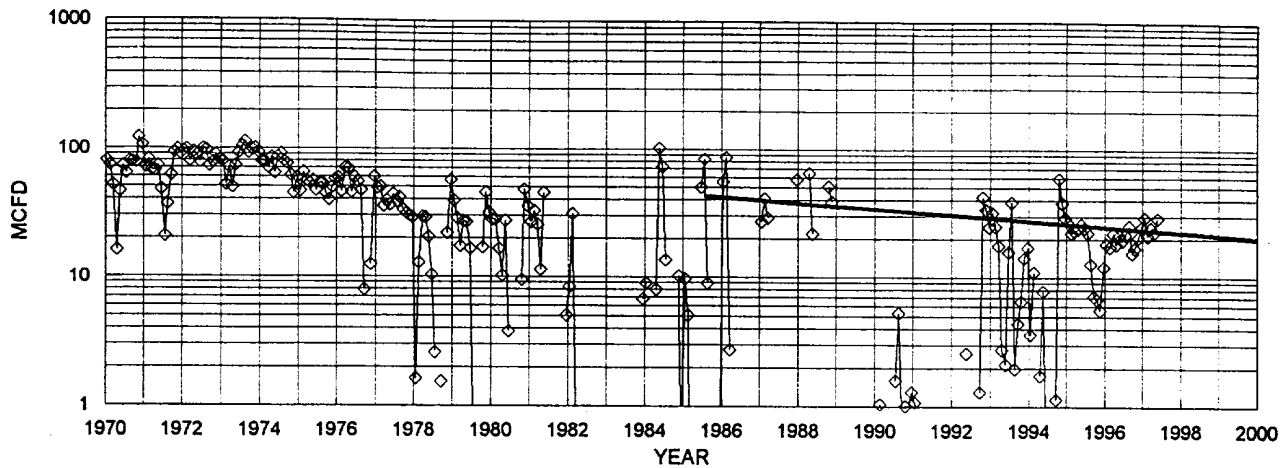
RECEIVED
FEB 25 1998
OIL CON. DIV.
DIST. 3

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☒ Yes ☐ No
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No
11. Will cross-flow occur? ☒ Yes ☐ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☒ Yes ☐ No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each others ☒ Yes ☐ No
13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)
14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No
15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S) _____
16. 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 all offset operators.
 - * Notification list of working, overriding and royalty interests for uncommon interest cases.
 - * Any additional statements, data, or documents required to support commingling.

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

SIGNATURE Kay Maddox TITLE Regulatory Agent DATE 12/10/97
TYPE OR PRINT NAME Kay Maddox TELEPHONE NO. (915) 686-5798

JICARILLA D 10 PICTURED CLIFFS
SECTION 31H-26N-03W



◇ PICTURED CLIFFS MCFD — FIT MCFD

HISTORICAL DATA:

1ST PROD: 12/66

OIL CUM: 0.00 MBO
GAS CUM: 372 MMCF
CUM OIL YIELD 0.0000 BBL/MCF

OIL YIELD: 0.0000 BBL/MCF, LAST 3 YRS
AVG. USED: 0.0000 BBL/MCF

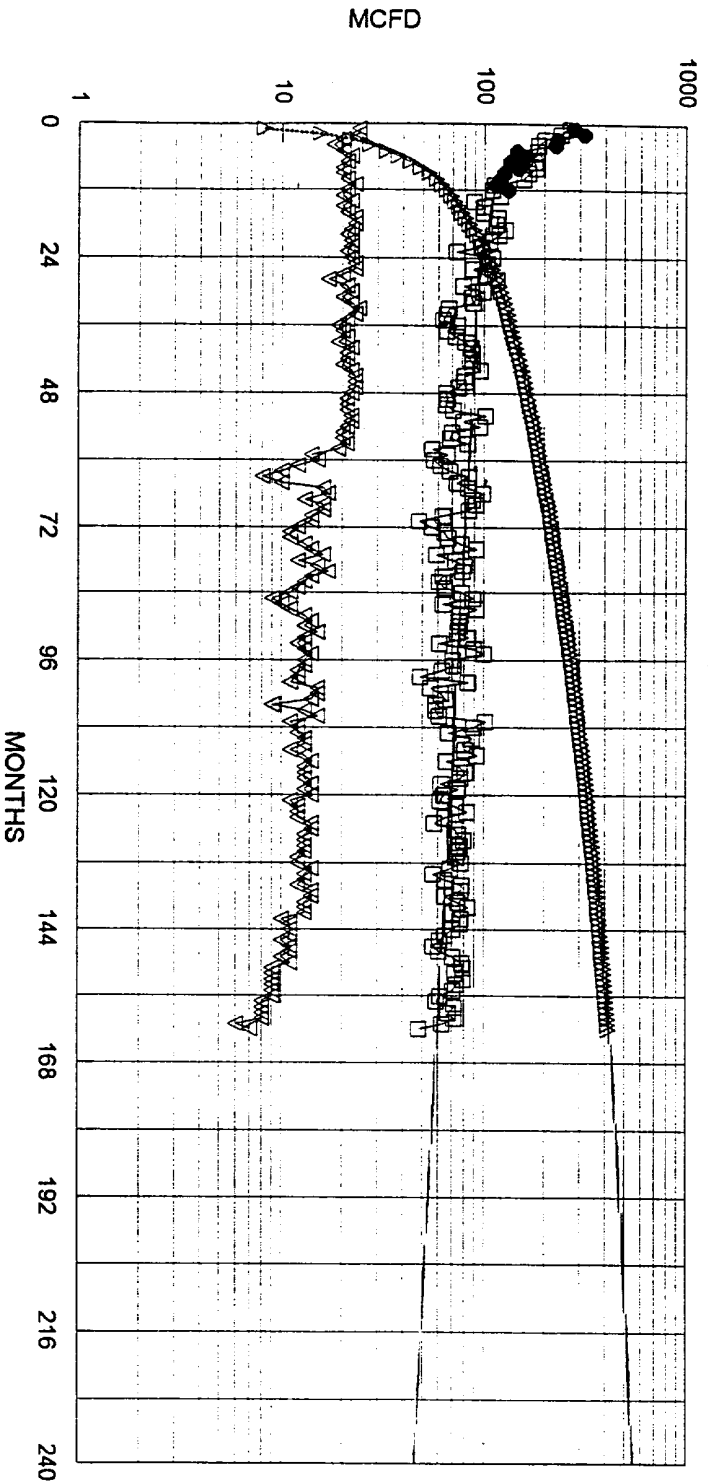
PROJECTED DATA

2/1/98 Q1: 22 MCFD
DECLINE RATE: 5.1% (EXPONENTIAL)

PRODUCTION FORECAST FOR SUBTRACTION METHOD COMMINGLE ALLOCATION

YEAR	MID-YEAR	MID-YEAR
	AVG. MCFD	AVG. BOPD
1998	22.2	0.0
1999	21.5	0.0
2000	20.4	0.0
2001	19.4	0.0
2002	18.4	0.0
2003	17.4	0.0
2004	16.5	0.0
2005	15.7	0.0
2006	14.9	0.0
2007	14.1	0.0
2008	13.4	0.0
2009	12.7	0.0
2010	12.1	0.0
2011	11.5	0.0
2012	10.9	0.0
2013	10.3	0.0
2014	9.8	0.0
2015	9.3	0.0
2016	8.8	0.0
2017	8.4	0.0
2018	8.0	0.0
2019	7.5	0.0
2020	7.2	0.0
2021	6.8	0.0
2022	6.5	0.0
2023	6.1	0.0
2024	5.8	0.0
2025	5.5	0.0
2026	5.2	0.0
2027	5.0	0.0

NORMALIZED MESAVERDE PRODUCTION
25 WELLS SINCE 1980; 26N 4W SEC 7-36



— FIT MCFD □ NORMALIZED MCFD △ NORM CUM MMCF
 ▽ WELLS ON PRODUCTION — FIT CUM MMCF ◆ 7 NEW MERIT REC. SINCE '94

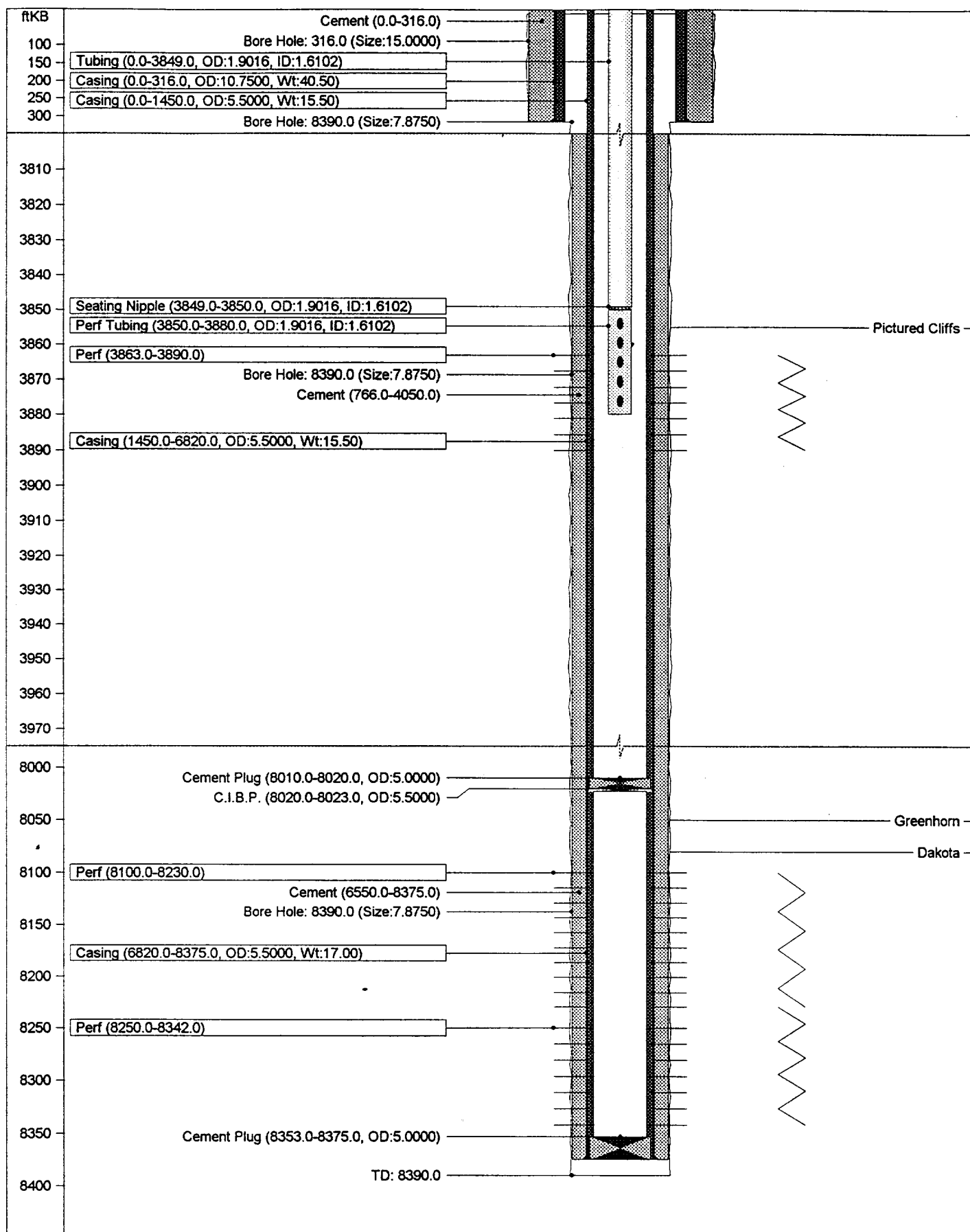
NORMALIZED AVG:

777 MMCF EUR
 549 MMCF IN 20 YRS
 20 MCFD E.L.
 0.004 BBL/MCF OIL YIELD

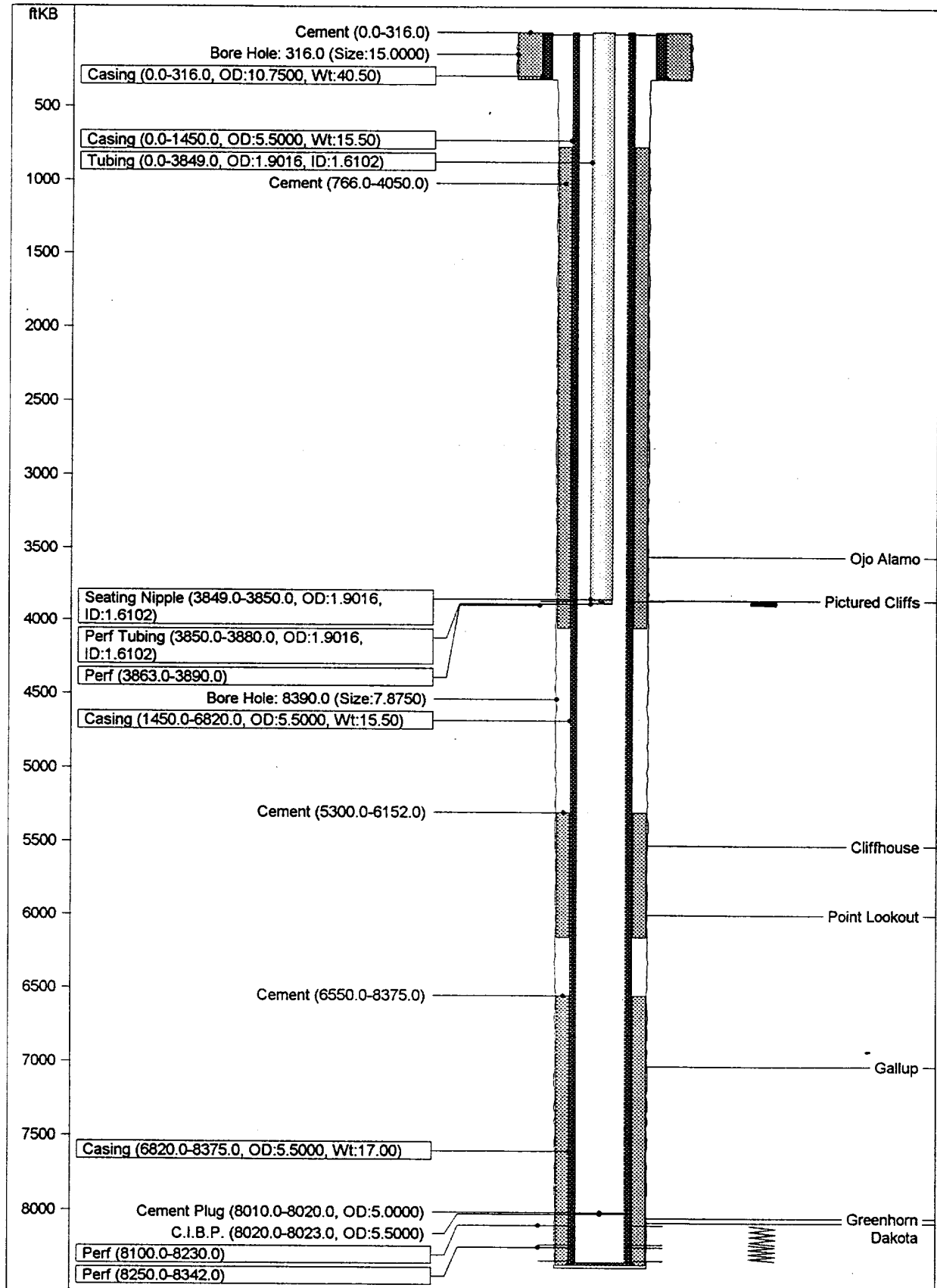
280 MCFD IP
 60% DECLINE, 1ST 12 MONTHS
 15% DECLINE, NEXT 12 MONTHS
 4.0% FINAL DECLINE

Similar performance expected in Jc.D 10; 31-26-3

JICARILLA D 10 (LFW 10/7/97)



JICARILLA D 10 (LFW 10/7/97)



JICARILLA D 10 (LFW 10/7/97)

JICARILLA D 10 (LFW 10/7/97)							
API Code	300390810000	Field Code	676398740				
TD	8390.0 ftKB	Basin	SAN JUAN BASIN				
PBTD	8010.0 ftKB	Basin Code	580				
State	New Mexico	Permit	17-Sep-66				
County	Rio Arriba	Spud	17-Sep-66				
District	San Juan O.U.	Finish Drl	21-Oct-66				
Permit No.		Completion	07-Nov-66				
TD Measured	8390	Abandon					
Reservoir	Pictured Cliffs						
Field	TAPACITO PC						
Location							
Meridian	NM	Top Latitude	36.36844				
Twntship	26N	Top Longitude	107.2879				
Range	3W	Top NS Distance	1850.0 ft N				
Section	31	Top EW Distance	825.0 ft E				
Quarter	NE SE	Bottom Latitude	0				
		Bottom Longitude	0				
		Btm NS Distance	0.0 ft				
		Btm EW Distance	0.0 ft				
Elevations							
KB	7258.0 ft	Cas Flng	0.0 ft				
Grd	7246.0 ft	Tub Head	0.0 ft				
KB-Grd	12.0 ft						
Bore Hole Data							
	Depth (ftKB)		Size (in)				
	316.0		15.0000				
	8390.0		7.8750				
Casing String - Surface Casing							
Item (in)	Btm (ftKB)	Jnts	ID	Wt	Grd	Thd	Comments
10.7500 in Casing	316.0	10	10.0500	40.50	H-40	ST&C	
Casing String - Production Casing							
Item (in)	Btm (ftKB)	Jnts	ID	Wt	Grd	Thd	Comments
5.5000 in Casing	1450.0	45	4.9500	15.50	J-55	LT&C	
5.5000 in Casing	6820.0	167	4.9500	15.50	J-55	ST&C	
5.5000 in Casing	8375.0	48	4.8900	17.00	J-55	ST&C	
Casing Cement							
Casing String	Top (ftKB)	Amount (sx)	Comments				
Surface Casing	0.0	300	Cement circ				
Production Casing	766.0	467	TOC by est DV @ 3998'				
Production Casing	5300.0	333	TOC by est DV @ 6152'				
Production Casing	6550.0	333	TOC by est				
Other (plugs, equip., etc.) - Plug Backs							
Date	Item		Int (ftKB)	Comments			
06-Nov-66	Cement Plug		8010.0 - 8020.0				
06-Nov-66	C.I.B.P.		8020.0 - 8023.0	5 1/2 " Baker Perm Model "N" BP. Isolate Dakota Interval			
28-Oct-66	Cement Plug		8353.0 - 8375.0				
Perforations							
Date	Int	Shots (/ft)	Comments				
29-Oct-66	8250.0 - 8342.0	2.0	@ 8250-62', 8268-76', 8332-42'				
30-Oct-66	8100.0 - 8230.0	2.0	@ 8100-07', 8110-18', 8212-21', 8225-8230'				
31-Oct-66	3863.0 - 3890.0	1.0					
Stimulations & Treatments							
Date	Type	Zone	Int	Fluid	Comments		
29-Oct-66	Fracture	Lwr Dakota	8230.0 - 8342.0	Water	Spearhead w/ 500 G 7 1/2% HCL. Frac w/ 53,130 G 0.8% KCL w/ add. + 40,000# 20/40 + 10,000# 10/20 sd. AIR= 57 bpm @ 3300#. ISIP 2200#		
30-Oct-66	Fracture	Upr Dakota	8100.0 - 8230.0	Water	Spearhead w/ 500 G 7 1/2% HCL. Frac w/ 56,070 G 0.8% KCL w/ add. + 30,000# 20/40 + 20,000# 10/20 sd. AIR= 54 bpm @ 2800#. ISIP 2100#		
01-Nov-66	Fracture	Pictured Cliffs	3863.0 - 3890.0	Water	Frac w/ 35,742 G 0.8% KCL + 50,000# 10/20 sd. AIR= 68 bpm @ 1500#. ISIP 100#		

JICARILLA D 10 (LFW 10/7/97)

Tubing String - Primary Tubing								
Item (in)	Top (ftKB)	Len (ft)	Jnts	ID (in)	Wt	Grd	Thd	Comments
1.9016 in Tubing	0.0	3849.0	118	1.6102	2.76	JCW		4/22/94: W/O showed 1 1/2" tbg POOH, Run Hot Oil, no information on tbg RIH, assuming same string was RIH.
1.9016 in Seating Nipple	3849.0	1.0		1.6102	0.00	JCW		
1.9016 in Perf Tubing	3850.0	30.0	1	1.6102	2.76	JCW		Land @ 3880'
Formation/Horizon Tops								
Top (ftKB)		Formation						
3555.0		Ojo Alamo						
3855.0		Pictured Cliffs						
5520.0		Cliffhouse						
5997.0		Point Lookout						
7029.0		Gallup						
8050.0		Greenhorn						
8080.0		Dakota						
Logs Run								
Date	Type	Int	Company	Comments				
19-Oct-66	IND	312.0 - 3348.0	Schlumberger					
20-Oct-66	DEN	3750.0 - 8347.0	Schlumberger					
28-Oct-66	GR-CBL	2700.0 - 8351.0	PGAS					
General Notes								
Date	Note							
14-Nov-66	Initial Potential: PC F 1500 MCFPD on 3/4" choke. CAO F 2525 MCFPD TP 117 CP 386 SICP 576							

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

OIL CONSERVATION DIVISION

PO Box 2088

Santa Fe, NM 87504-2088

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 30-039-08100		2 Pool Code 72319	3 Pool Name Blanco Mesaverde	
4 Property Code 18021	5 Property Name Jicarilla D			6 Well Number #10
7 OGRID No. 005073	8 Operator Name Conoco Inc., 10 Desta Drive, Ste. 100W, Midland, TX 79705-4500			9 Elevation 7225' GL

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
H	31	26N	3W		1850	North	825	East	Rio Arriba

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1 dn	Feet from the	North/South line	Feet from the	East/West line	County
---------------	---------	----------	-------	----------	---------------	------------------	---------------	----------------	--------

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320			

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

16			<div style="border: 2px dashed black; padding: 10px; margin-bottom: 10px;"> </div>
			<h3>17 OPERATOR CERTIFICATION</h3> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <div style="margin-top: 20px;"> <div style="display: flex; justify-content: space-between;"> Signature Kay Maddox </div> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> Printed Name Kay Maddox </div> <div style="display: flex; justify-content: space-between;"> Title Regulatory Agent </div> <div style="display: flex; justify-content: space-between;"> Date Dec 9, 1997 </div> </div>
			<h3>18 SURVEYOR CERTIFICATION</h3> <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> <div style="margin-top: 20px;"> <div style="display: flex; justify-content: space-between;"> Date of Survey </div> <div style="display: flex; justify-content: space-between;"> Signature and Seal of Professional Surveyor: </div> </div>
			<div style="display: flex; justify-content: space-between;"> Certificate Number </div>

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACERAGE DEDICATION PLAT**

All distances must be from the outer boundaries of the Section

Operator SOUTHERN UNION PRODUCTION COMPANY			Lease JICARILLA "D"			Well No. 10		
Unit Letter H	Section 31	Township 26 NORTH	Range 3 WEST	County RIO ARriba				
Actual Footage Location of Well:								
1850	feet from the	NORTH	line and	825	feet from the	EAST	line	
Ground Level Elev 7225.0	Producing Formation Dakota Pictured Cliffs		Pool Basin Dakota	Dedicated Average 180		Acres 160		

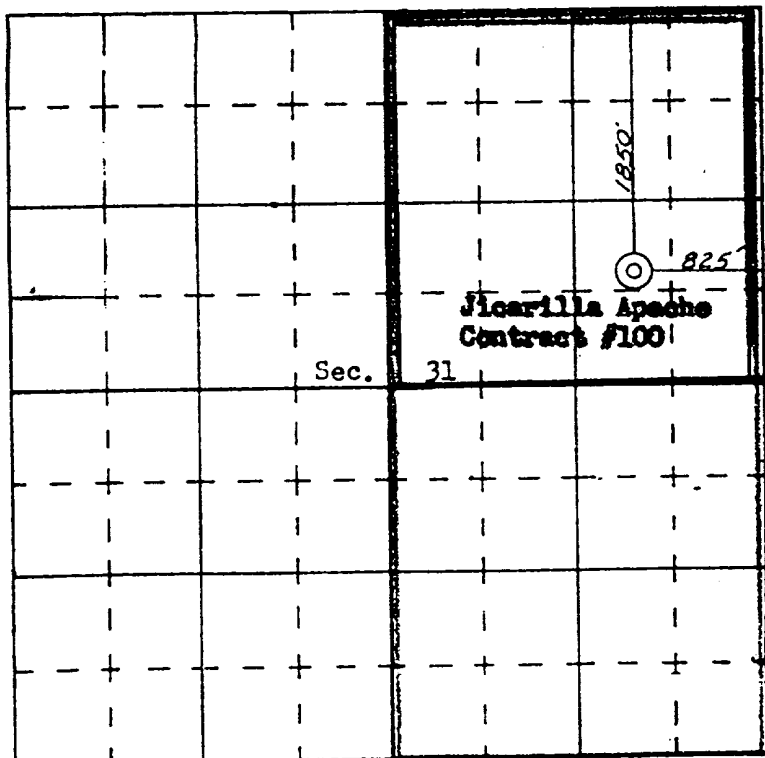
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is 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 **Communitization**

If answer is "no," list the owners and tract descriptions which have actually 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.

—— **Dakota Dedicated Acreage**
—— **Pictured Cliffs Dedicated Acreage**



SCALE—4 INCHES EQUALS 1 MILE

SAN JUAN ENGINEERING COMPANY, FARMINGTON, N. M.

CERTIFICATION

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

Original signed by
GILBERT D. NOLAND, JR.

Name

Gilbert D. Noland, Jr.

Position

Drilling Superintendent

Company

Southern Union Production Co.

Date

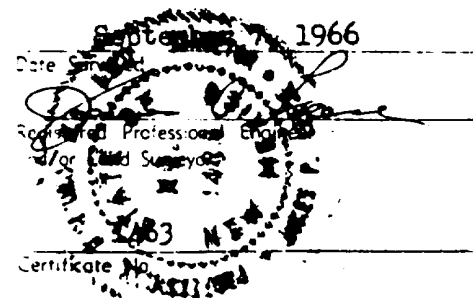
September 13, 1966

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 **September 13, 1966**

Registered Professional Engineer
or Field Surveyor

Certificate No.

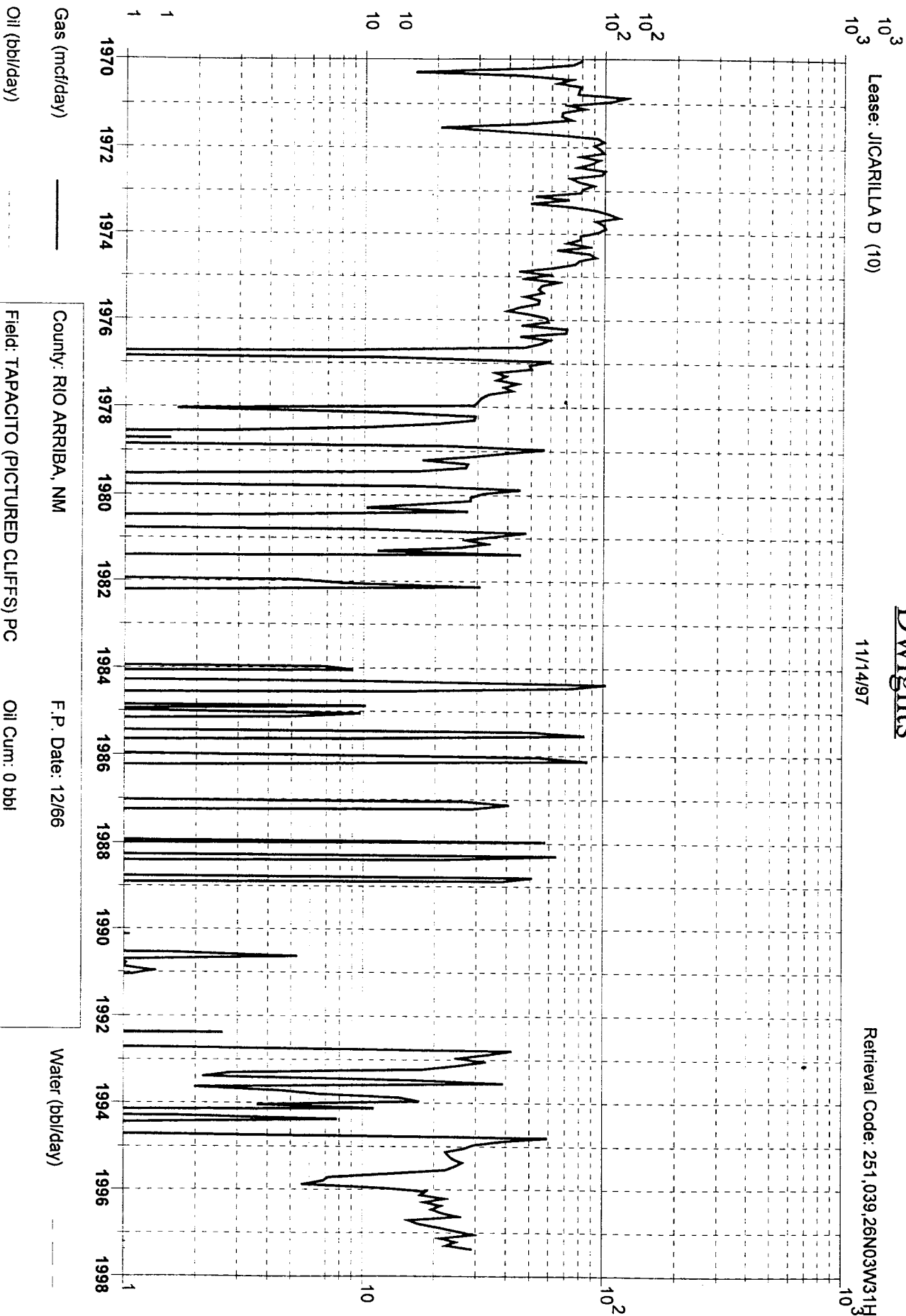


Dwights

Lease: JICARILLA D (10)

11/14/97

Retrieval Code: 251.039.26N03W31H00PC



County: RIO ARriba, NM

F.P. Date: 12/66

Field: TAPACITO (PICTURED CLIFFS) PC

Oil Cum: 0 bbl

Reservoir: PICTURED CLIFFS

Gas Cum: 372.4 mmcf

Operator: CONOCO INC

Location: 31H 26N 3W

Water (bbl/day) ———

Conoco, Inc.
Jicarilla D #10
Section 31, T-26-N, R-3-W, H
Rio Arriba County, New Mexico

Re: Application for Downhole Commingling

Offset Operators:

Burlington Resources
PO Box 4289
Farmington, New Mexico 87499

Dugan Production Corp.
PO Box 420
Farmington, New Mexico 87499-0420

Beartooth Oil & Gas Co
PO Box 2564
Billings, Montana 59103

John E. Schalk
PO Box 25825
Albuquerque, New Mexico 87125

Minel Inc
309 Washington SE
Albuquerque, New Mexico 87108

Jicarilla D No. 10

Downhole Commingling Justification

The royalty interests of the Jicarilla Tribe in all leases operated by Conoco are identical across all producing formations and will in no way be affected by the commingling process or the allocation of production to the various pools. The production and revenue benefits to be gained through downhole commingling will be equally realized by Conoco and the Jicarilla Tribe. This is specifically true of the Jicarilla D No. 10 well which will benefit as described in the following justification.

The goal of any prudent operator, to the benefit of all interest owners, is to develop and produce the maximum volume of hydrocarbons in the most efficient manner and with the minimum costs possible. Downhole commingling of San Juan Basin gas wells provides several significant benefits to all of the interest owners involved in those wells such as:

1. More efficient rate of recovery
2. Greater ultimate recovery
3. Less expensive maintenance and operation
4. Development of otherwise uneconomical reserves

The continued production of multiple gas pools from the same wellbore in most San Juan Basin wells is inherently inefficient and not only results in restricted producing rates, but reduces their ultimate recovery. Separately producing multiple gas pools is currently accomplished either by using multiple tubing strings or by producing one zone up the casing behind a single tubing string.

One of the major problems associated with such operational schemes is related to the production of fluids (oil, condensate and/or water). Efficient recovery mandates that these fluids be continuously lifted to keep the wells from loading up and either killing the wells or severely restricting their flow rates. However, another major problem is associated with the fact that most of the gas pools in the San Juan Basin, and especially the large Mesaverde and Dakota pools, are largely depleted and are down to very low reservoir pressures as a recovery mechanism. Therefore, most of these wells do not have sufficient remaining reservoir energy to adequately lift these fluids and maintain efficient flow.

With low reservoir pressures, the only way to keep these wells unloaded and producing efficiently is to pump these fluids either by beam pump or downhole plungers. The major impediment to resolving this problem lies in the fact that these wells are typically completed with either 4 1/2" to 5 1/2" production casing. This restricts the size of tubing that can be utilized for multiple zones. Many of the tubing strings are only 1 1/16" and will not accommodate plunger installation. Plunger lift becomes increasingly less efficient in smaller than 2 3/8" tubing.

Through the use of plunger lift operations, to keep these low pressure wells unloaded, Conoco has experienced dramatic increases in production. Such increases in producing efficiency will result not only in higher current rates but will promote greater ultimate recoveries. However, these significant improvements in production cannot be accomplished in wells with small multiple tubing strings or with dualled production up the casing.

Downhole commingling to increase efficiency, development, and ultimate recovery from these mature gas reservoirs is the most important basin activity to occur in several years. The major emphasis of downhole commingling is, after all, on increasing produced volumes. Through this procedure

1. Many shut-in and abandoned zones are being reactivated
2. Many low rate completions are being revitalized or even doubled in rate
3. Even higher rate wells are benefiting from rate and recovery increases
4. Many new wells are being drilled initially as downhole commingled wells that could not be economically developed otherwise.

As a side light to production advantages, there are numerous additional benefits to be realized from reduced operational costs and maintenance. Reducing these costs are not only for the benefit of the operator. This results in longer well life and higher margins of income for all interest owners. However, operational costs savings are secondary to the benefits of improved recovery and should not be the focus of this program.