

DISTRICT I

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

DISTRICT II

811 South First St., Artesia, NM 88210-2836

DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1893

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

APPLICATION FOR DOWNHOLE COMMINGLING

Form C-107-A
New 3-12-96

APPROVAL PROCESS :

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☐ YES ☐ NO

Burlington Resources Oil & Gas Company

PO Box 4289, Farmington, NM 87499

Operator

Address

San Juan 28-6 Unit

135M

I 06-27-6

Rio Arriba

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7462 API NO. 30-039-25628 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	Blanco Mesaverde - 72319		Basin Dakota - 71599
2. Top and Bottom of Pay Section (Perforations)	will be supplied upon completion		will be supplied upon completion
3. Type of production (Oil or Gas)	gas		gas
4. Method of Production (Flowing or Artificial Lift)	flowing		flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Current) a. 558 psi (see attachment) (Original) b. 1288 psi (see attachment)	a. b.	a. 1154 psi (see attachment) b. 3198 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1227		BTU 1125
7. Producing or Shut-In?	shut in		shut in
Production Marginal? (yes or no)	no		yes
* If Shut-In 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. * If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: n/a Rates: • Date: n/a Rates:	Date: Rates: Date: Rates:	Date: n/a Rates: Date: n/a Rates:
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: % Gas: % will be supplied upon completion	Oil: % Gas: %	Oil: % Gas: % will be supplied upon completion

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 ☐ No11. Will cross-flow occur? ☒ Yes ☐ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flow 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 other? ☒ 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 ☐ No15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). Reference R-10696 attached

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 Sean Woolverton TITLE Production Engineer DATE 3/12/97TYPE OR PRINT NAME Sean Woolverton TELEPHONE NO. (505) 326-9700

1790, Hobbs, NM 88241-1900
District III
1700 Drawer DD, Artesia, NM 88211-0719
District III
1000 N. Main Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico RECEIVED
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION PH 3: 26
PO Box 2088
Santa Fe, NM 87504-2088
070 FARMINGTON, NM

Form C-1
Revised February 21, 1991
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-		Pool Code 72319/71599	Pool Name Blanco Mesaverde/Basin Dakota
Property Code 7462	Property Name San Juan 28-6 Unit		Well Number 135M
OGRID No. 14538	Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		Elevation 6504'

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
I	6	27-N	6-W		1665	South	875	East	R.A.

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

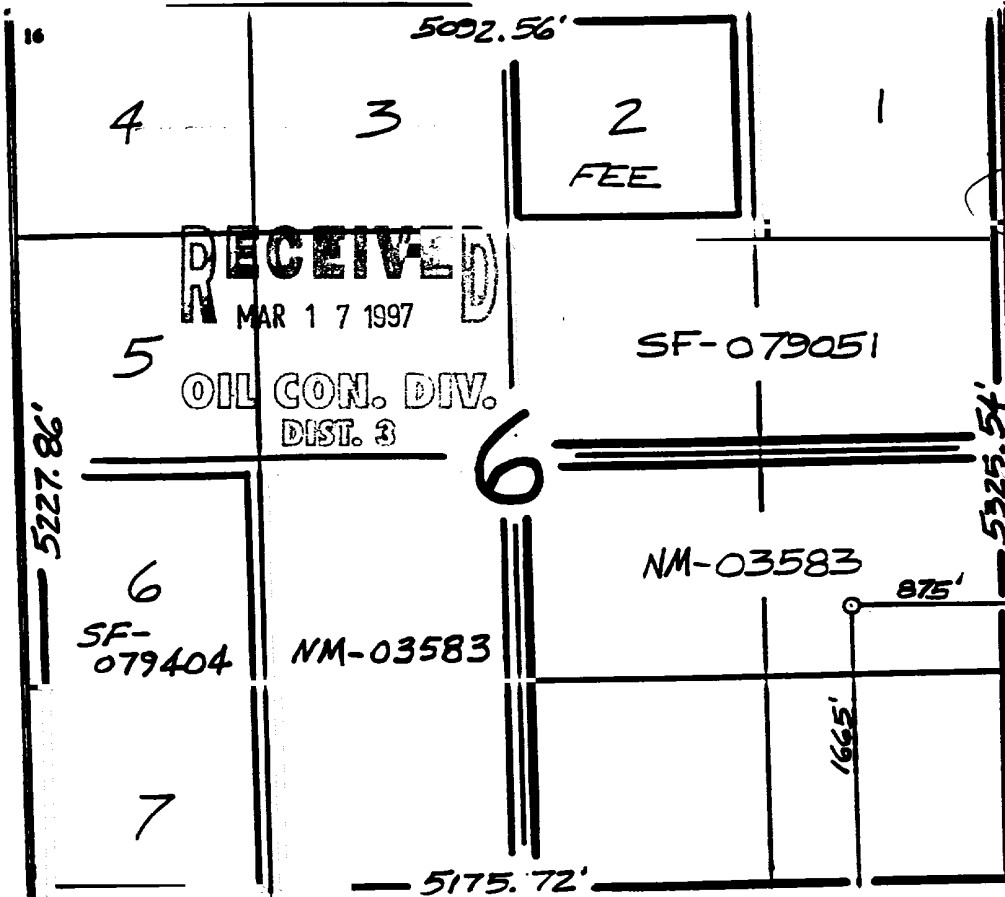
12 Dedication Acres
MV-E/320.48
DK-S/317.12

13 Joint or Infill

14 Consideration 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



17 OPERATOR CERTIFICATE

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

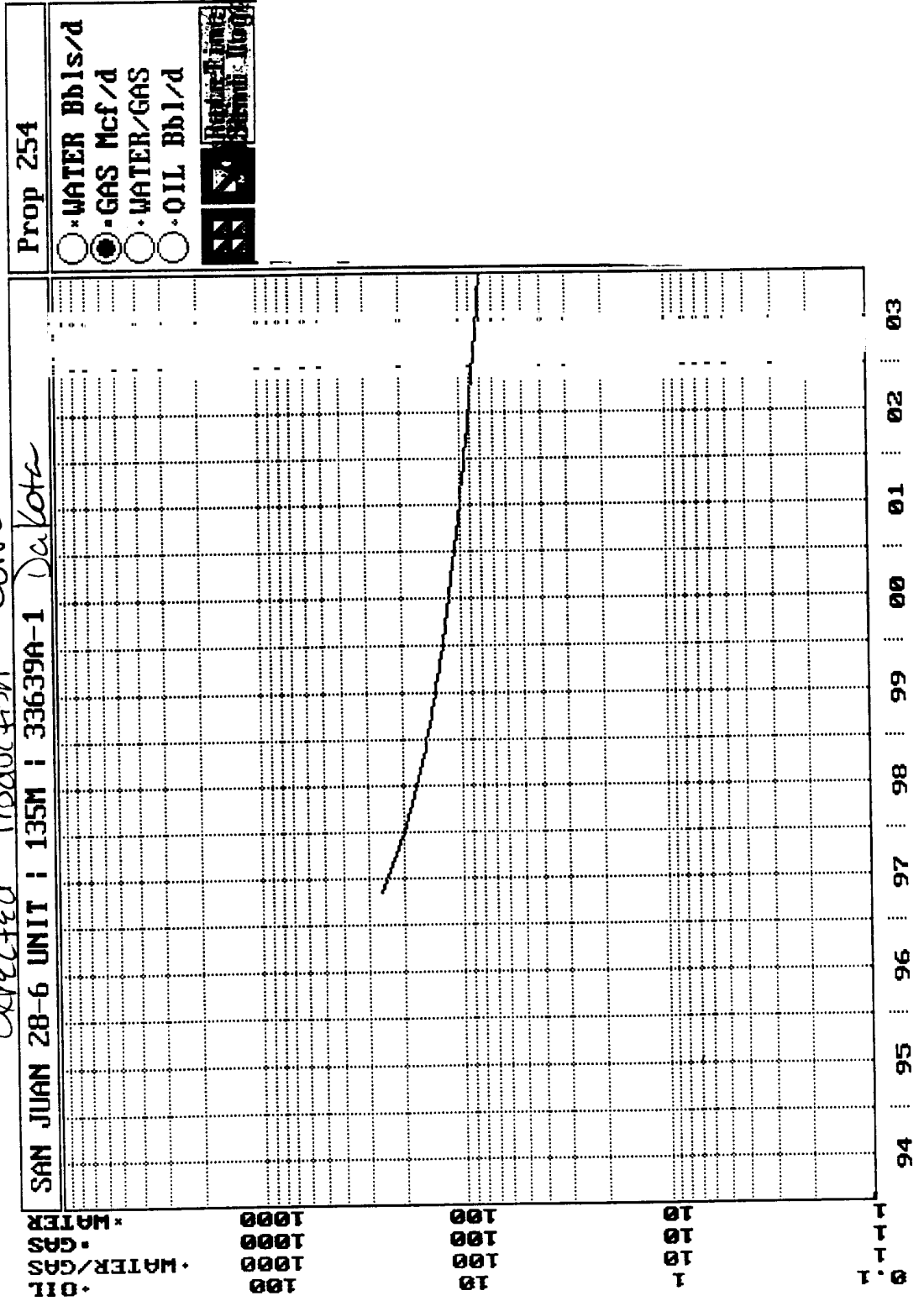
Peggy Bradfield
Signature
Peggy Bradfield
Printed Name
Regulatory Administrator
Title
12-30-96
Date

18 SURVEYOR CERTIFICATE

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made or under my supervision, and that the same is true and correct to the best of my belief.

10/10/96
Date of Survey
Signature of Surveyor
NEAL C. EDWARDS
6857
6857
Certificate No.

Expected Production Curve



Expected Production Curve

SAN JUAN 28-6 UNIT : 135M : 33700A-1 Mesa Verde

• OIL
• WATER/GAS
• GAS
• WATER

Prop 208 *

- ☐ • WATER Bbls/d
- ☒ • GAS Mcf/d
- ☐ • WATER/GAS
- ☐ • OIL Bbl/d

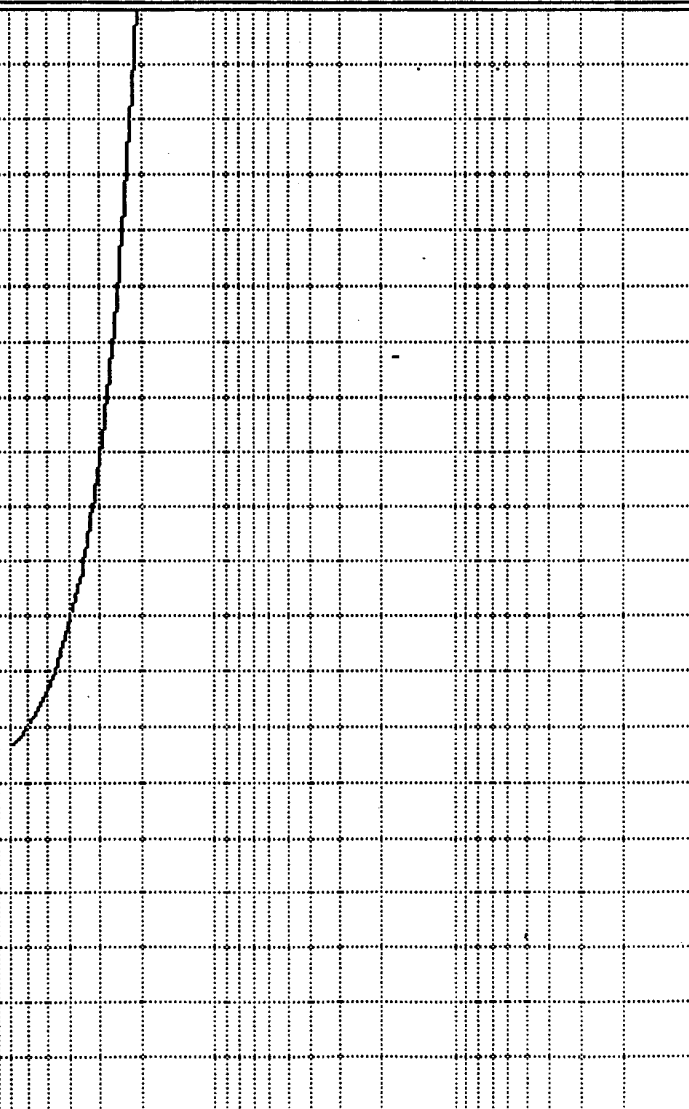
Rate Time
Semi Log

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1000

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100
100
100

1
10
10
10

0.1
1
1
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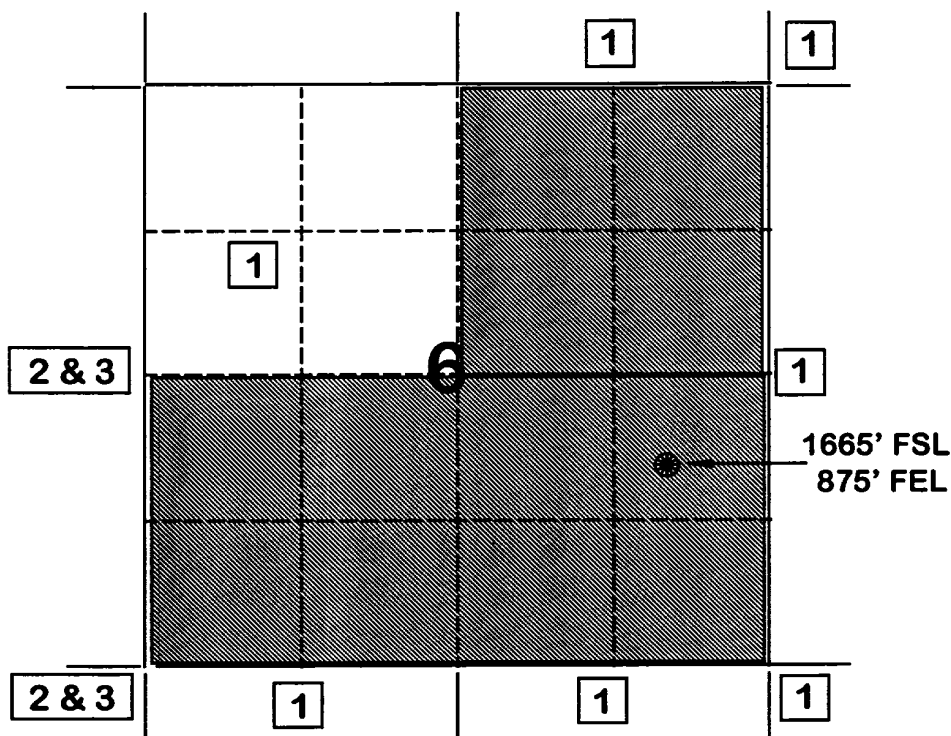
94 95 96 97 98 99 00 01 02 03

BURLINGTON RESOURCES OIL AND GAS COMPANY

**San Juan 28-6 Unit #135M
OFFSET OPERATOR \ OWNER PLAT**

Mesaverde (E/2)/Dakota (S/2) Formations Commingle Well

Township 27 North, Range 6 West



- 1) Burlington Resources Oil and Gas Company
- 2) Amoco Production Company
Attn: Bruce Zimney
P.O. Box 800
Denver, CO 80201
- 3) Conoco Inc.
10 Desta Drive, Suite 100W
Midland, TX 79705-4500

**FLOWING AND STATIC BHP
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.658
COND. OR MISC. (C/M)	C
%N2	0.15
%CO2	1.09
%H2S	0
DIAMETER (IN)	1.5
DEPTH (FT)	7276
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	969
BOTTOMHOLE PRESSURE (PSIA)	1153.5

SAN JUAN 28-6 UNIT #135 DAKOTA - CURRENT

**FLOWING AND STATIC BHP
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.658
COND. OR MISC. (C/M)	C
%N2	0.15
%CO2	1.09
%H2S	0
DIAMETER (IN)	1.5
DEPTH (FT)	7276
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	2656
BOTTOMHOLE PRESSURE (PSIA)	3198.2

SAN JUAN 28-6 UNIT #135 DAKOTA - ORIGINAL

**FLOWING AND STATIC BHP
CULLENDER AND SMITH METHOD**
VERSION 1.0 3/13/94

GAS GRAVITY	0.72
COND. OR MISC. (C/M)	C
%N2	0.38
%CO2	0.69
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	5133
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	488
BOTTOMHOLE PRESSURE (PSIA)	558.2

SAN JUAN 28-6 UNIT #37 MESAVERDE - CURRENT

**FLOWING AND STATIC BHP
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.72
COND. OR MISC. (C/M)	C
%N2	0.38
%CO2	0.69
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	5133
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1108
BOTTOMHOLE PRESSURE (PSIA)	1288.3

SAN JUAN 28-6 UNIT #37 MESAVERDE - ORIGINAL

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Property Name: SAN JUAN 28-6 UNIT | 37 | 49277A-1
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SS 28-6 #135m
mesa verde offset

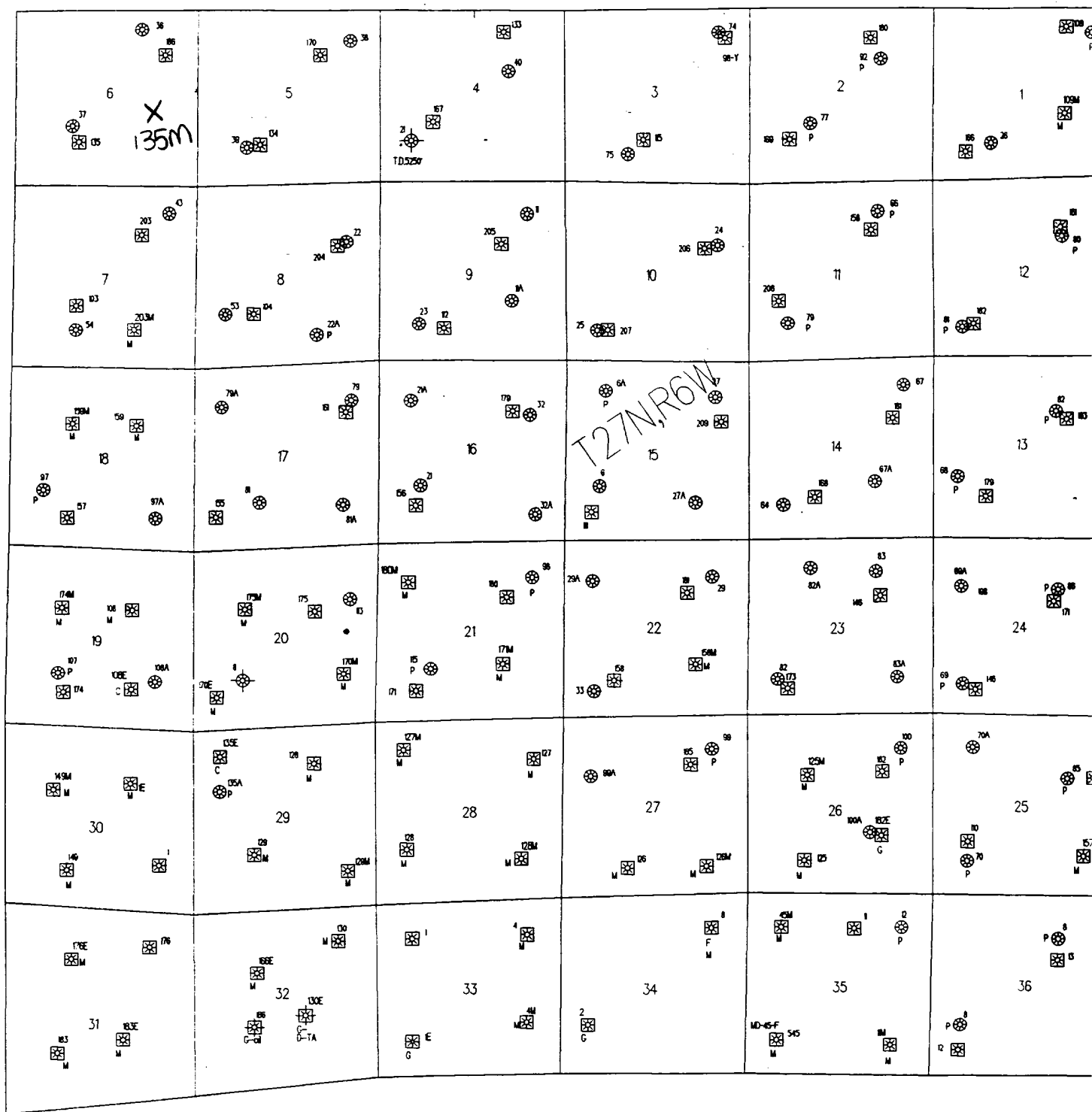
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09/06/58	415000	941.0	
07/14/59	556000	746.0	
12/14/60	578000	767.0	
02/13/61	594000	759.0	
04/09/62	680000	715.0	
05/07/63	736000	714.0	
12/10/64	744000	725.0	
05/03/65	763000	689.0	
06/07/66	839000	643.0	
06/02/67	891000	613.0	
05/27/68	952000	596.0	
10/16/70	1057808	562.0	
07/07/71	1098073	536.0	
05/30/72	1152358	474.0	
05/09/73	1202867	503.0	
07/23/74	1250820	508.0	
01/29/76	1296803	489.0	
11/29/76	1328244	489.0	
05/10/78	1400253	406.0	
06/16/80	1462716	427.0	
05/18/82	1504953	476.0	
05/20/91	1596214	476.0	
06/08/91	1596461	488.0	← current

Page No.: 1
Print Time: Tue Mar 04 08:29:00 1997
Property ID: 1849
Property Name: SAN JUAN 28-6 UNIT | 135 | 44075A-1
Table Name: K:\ARIES\RR97PDP\TEST.DBF

SS 28-6 #135m
Dakota Offset

--DATE-- ---CUM GAS-- M SIWHP
-----Mcf-----Psi

02/06/73	0	2656.0	← original
06/11/73	55964	1594.0	
07/23/74	179728	868.0	
05/23/75	236444	913.0	
05/12/77	353838	816.0	
06/25/79	446426	778.0	
07/06/81	520306	893.0	
12/10/85	630839	953.0	
08/31/88	691370	969.0	← current



**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 11628
ORDER NO. R-10696**

**APPLICATION OF BURLINGTON RESOURCES
OIL & GAS COMPANY FOR THE ESTABLISHMENT
OF A DOWNHOLE COMMINGLING "REFERENCE
CASE" FOR ITS SAN JUAN 28-6 UNIT PURSUANT
TO DIVISION RULE 303.E. AND THE ADOPTION
OF SPECIAL ADMINISTRATIVE RULES THEREFOR,
SAN JUAN COUNTY, NEW MEXICO..**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 17 and November 7, 1996, at Santa Fe, New Mexico, before Examiners David R. Catanach and Michael E. Stogner, respectively.

NOW, on this 12th day of November, 1996, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Burlington Resources Oil & Gas Company (Burlington), pursuant to the provisions of Division Rule 303.E., seeks to establish a downhole commingling "reference case" to provide exceptions for (a) marginal economic criteria, (b) pressure criteria, (c) allocation formulas and (d) modification of notification rules on a unit-wide basis for downhole commingling of Dakota, Mesaverde, Fruitland Coal and Pictured Cliffs gas production within existing or future drilled wells within the San Juan 28-6 Unit, San Juan County, New Mexico.
- (3) Division Rule No. 303.E., amended by Order No. R-10470-A, currently states:

- c) establish a "reference case" whereby the Division utilizes the data presented in the immediate case to endorse or approve certain methods of allocating production whereby the applicant need not submit additional data or justification when proposing a certain method of allocating production on Form C-107-A's subsequently filed for wells within the San Juan 28-6 Unit; and,
- d) establish a "reference case" or an administrative procedure for authorizing the downhole commingling of existing or future drilled wells within the San Juan 28-6 Unit without additional notice to each affected interest owner as required by Division Rule No. 303.D.

(7) In support of its request to except marginal economic criteria, the applicant presented geologic and engineering evidence and testimony which indicates that within the San Juan 28-6 Unit:

- a) the structure and thickness of the Dakota and Pictured Cliffs formations are very consistent;
- b) the average recoverable Dakota and Pictured Cliffs gas reserves underlying an undeveloped drill block are approximately 449 MMCFG and 186 MMCFG, respectively;
- c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 254 MCFGD and 216 MCFGD, respectively; and,
- d) the estimated ultimate gas recoveries and initial producing rates from the Dakota and Pictured Cliffs formations are insufficient to justify drilling stand alone wells and/or dually completed wells to recover such gas reserves.

(8) The evidence and testimony presented by the applicant indicates that the Dakota and Pictured Cliffs formations within the San Juan 28-6 Unit should be properly classified as "marginal".

(9) In support of its request to except pressure criteria within the Dakota and Pictured Cliffs formations within the San Juan 28-6 Unit, the applicant presented engineering evidence and testimony which indicates that:

- c) providing notice to each interest owner within the San Juan 28-6 Unit of subsequent downhole comminglings is unnecessary and is an excessive burden on the applicant;
- d) the downhole commingling of wells within the San Juan 28-6 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 28-6 Unit should not violate the correlative rights of any interest owner;
- e) no interest owner appeared at the hearing in opposition to the establishment of a "reference case" or administrative procedure for notice.

(14) An administrative procedure should be established within the San Juan 28-6 Unit for obtaining approval for subsequent downhole commingled wells without notice to Unit interest owners, provided however that, all other provisions contained within Division Rule No. 303.C. are complied with.

(15) Approval of the proposed "reference cases" for marginal economic criteria, pressure criteria, allocation formulas and notice will lessen the burden on the applicant insofar as providing the data required pursuant to Division Rule No. 303.D. and Form C-107-A, will provide the applicant a streamlined method for obtaining downhole commingling approvals within the San Juan 28-6 Unit, and will not violate correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Burlington Resources Oil & Gas Company to establish a "reference case" for (a) marginal economic criteria, (b) pressure criteria, (c) allocation formulas and (d) modification of notification rules on a unit-wide basis for downhole commingling of Dakota, Mesaverde, Fruitland Coal and Pictured Cliffs gas production within existing or future drilled wells within the San Juan 28-6 Unit, San Juan County, New Mexico, is hereby approved.
