

DISTRICT I
P.O. 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 87505-6429

Form C-107-A
New 3-12-96
APPROVAL PROCESS :
☒ Administrative ☐ Hearing
EXISTING WELLBORE
☐ YES ☒ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Burlington Resources Oil & Gas Company

PO Box 4289, Farmington, NM 87499

Operator Address
SAN JUAN 28-6 UNIT 141M D 36-28N-6W Rio Arriba

Lease Well No. Unit Ltr. - Sec - Twp - Rge County
OGRID NO. 14538 Property Code 7462 API NO. 30-039-25743 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. 461 psi (see attachment) (Original) b. 1264 psi (see attachment)	a. b.	a. 941 psi (see attachment) b. 3132 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 999		BTU 1070
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	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: n/a Rates:	Date: 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 ☐ 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 other? ☒ 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). R-10696
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 C. Woolverton TITLE Production Engineer DATE 10/02/97

TYPE OR PRINT NAME Sean C. Woolverton TELEPHONE NO. (505) 326-9700

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer 00, 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 30-039-	Pool Code 72319/71599	Pool Name Blanco Mesaverde/Basin Dakota
Property Code 7462	Property Name San Juan 28-6 Unit	Well Number 141M
GRID No. 14538	Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	Elevation 6554'

¹⁰ Surface Location

UL or lot no. D	Section 36	Township 28	Range 6	Lot Idn	Feet from the 1130	North/South line North	Feet from the 990	East/West line West	County R.A.
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¹¹ Bottom Hole Location if Different From Surface

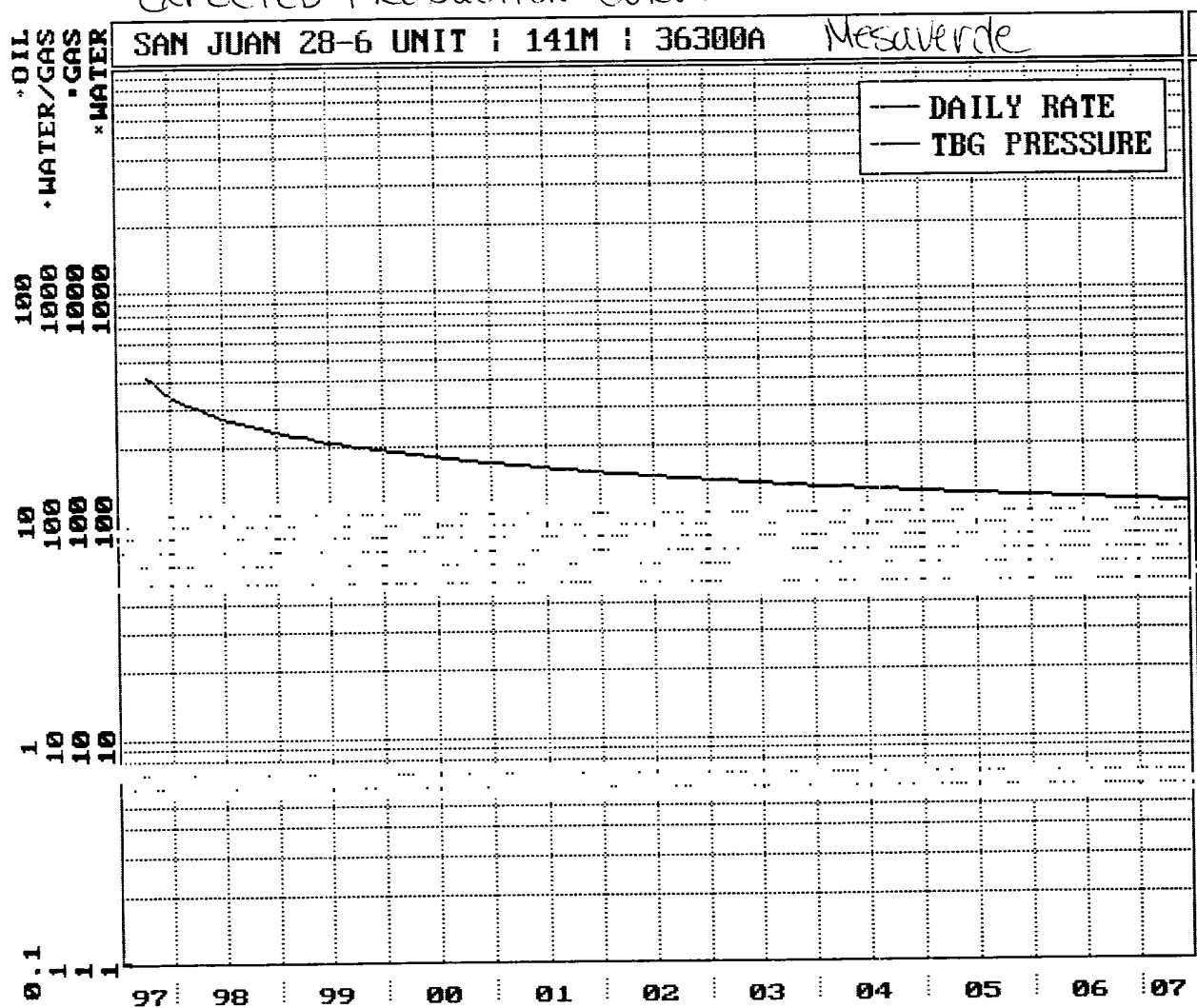
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹² Dedicated Acres MV-W/321.21 DK-W/321.21	¹³ Joint or Infill 21	¹⁴ Consolidation Code	¹⁵ Order No.
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NO 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>5280.00'</p> <p>1130'</p> <p>990'</p> <p>NMSF-079419</p> <p>NM-E 809-21</p> <p>36</p> <p>NMSF-079418</p> <p>NMSF-079734</p> <p>4 3 2 1</p> <p>5280.00'</p> <p>5311.68'</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>Signature Peggy Bradfield</p> <p>Printed Name Regulatory Administrator</p> <p>Title</p> <p>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>5/23/97</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor NEALE C. EDWARDS NEW MEXICO 6857</p> <p>6857 Certificate Number</p>
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EXPECTED PRODUCTION CURVE



EXPECTED PRODUCTION CURVE

SAN JUAN 28-6 UNIT : 141M : 36539A-3

Dakota

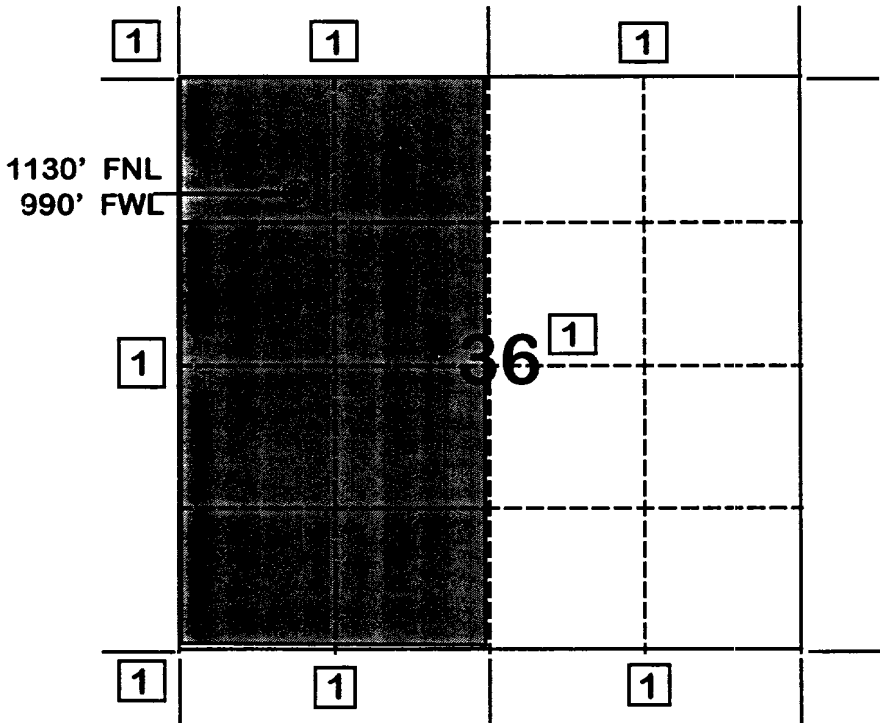


BURLINGTON RESOURCES OIL AND GAS COMPANY

**San Juan 28-6 Unit #141M
OFFSET OPERATOR \ OWNER PLAT**

Mesaverde / Dakota Formations Commingle Well

Township 28 North, Range 6 West



1) Burlington Resources Oil and Gas Company

SJ 28-6 Unit #141M

Bottom Hole Pressures

Flowing and Static BHP

Cullender and Smith Method

Version 1.0 3/13/94

Mesaverde		Dakota	
<u>MV-Current</u>		<u>DK-Current</u>	
GAS GRAVITY	0.587	GAS GRAVITY	0.625
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.07	%N2	0.3
%CO2	1.85	%CO2	1.19
%H2S	0	%H2S	0
DIAMETER (IN)	2	DIAMETER (IN)	1.5
DEPTH (FT)	5654	DEPTH (FT)	7793
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	137	BOTTOMHOLE TEMPERATURE (DEG F)	198
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	410	SURFACE PRESSURE (PSIA)	792
BOTTOMHOLE PRESSURE (PSIA)	461.3	BOTTOMHOLE PRESSURE (PSIA)	940.7
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	0.587	GAS GRAVITY	0.625
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.07	%N2	0.3
%CO2	1.85	%CO2	1.19
%H2S	0	%H2S	0
DIAMETER (IN)	2	DIAMETER (IN)	1.5
DEPTH (FT)	5654	DEPTH (FT)	7793
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	137	BOTTOMHOLE TEMPERATURE (DEG F)	198
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1112	SURFACE PRESSURE (PSIA)	2600
BOTTOMHOLE PRESSURE (PSIA)	1264.2	BOTTOMHOLE PRESSURE (PSIA)	3131.6

Page No. : 3

Print Time: Wed Aug 20 11:26:35 1997

Property ID: 4092

Property Name: SAN JUAN 28-6 UNIT	97	53449B-1
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Table Name: K:\ARIES\RR98PDP\TEST.DBF

3-1
San Juan 28-6 Unit

141 M

Mesaverde offset

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--DATE--  ---CUM GAS--  M SIWHP
#####  #####McF#####Psi#####
```

07/03/60	0	1112.0	-original
08/25/60	0	1111.0	
06/13/61	126000	842.0	
05/29/62	254000	805.0	
05/16/63	401000	759.0	
05/26/64	557000	710.0	
03/08/65	686000	693.0	
04/12/66	881000	648.0	
03/22/67	1054000	636.0	
04/01/68	1206000	622.0	
06/27/69	1391284	575.0	
05/25/70	1537162	536.0	
05/04/71	1696032	492.0	
05/22/72	1839592	479.0	
08/21/73	2030055	502.0	
07/31/74	2153304	422.0	
07/12/76	2377398	383.0	
05/15/78	2560251	444.0	
01/29/80	2736232	343.0	
04/18/80	2761116	358.0	
05/28/82	2898154	404.0	
02/06/84	2925105	509.0	
06/06/84	2935873	495.0	
06/07/85	2961703	504.0	
04/07/86	2984973	504.0	
09/07/89	3113545	512.0	
01/16/91	3148846	520.0	
08/26/91	3166094	532.0	
01/03/94	3249819	410.0	-current

- current

Page No.: 5

Print Time: Wed Aug 20 11:26:36 1997

Property ID: 1861

Property Name: SAN JUAN 28-6 UNIT | 150 | 52360A-1

Table Name: K:\ARIES\RR98PDP\TEST.DBF

San Juan 28-6 Unit

#141M

Dakota Offset

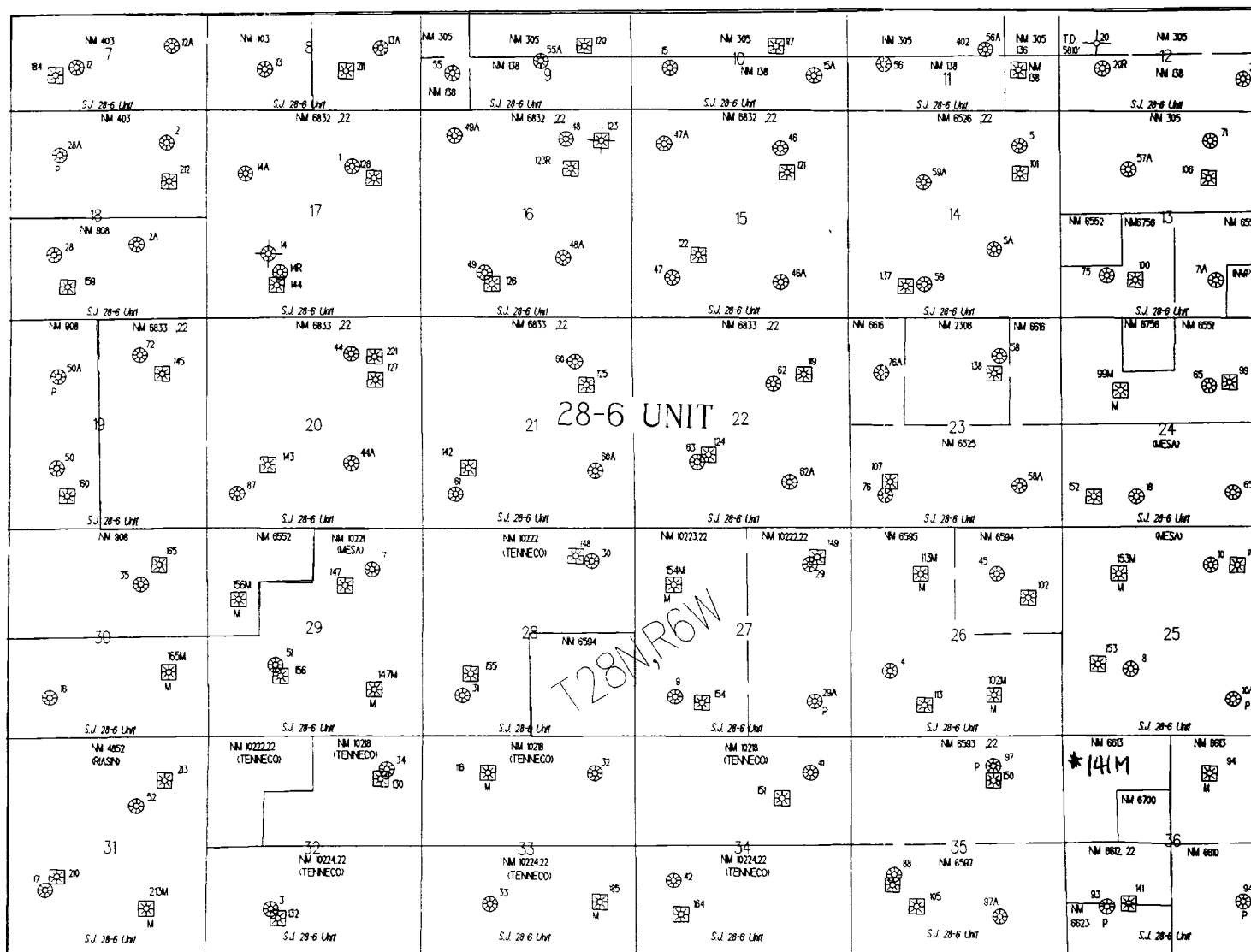
--DATE-- ---CUM GAS-- M SIWHP
-----Mcf-----Psi-----

05/11/70	0	2600.0	-original
12/28/70	61355	1480.0	
10/19/71	157406	1130.0	
05/22/72	201749	1052.0	
08/21/73	285814	946.0	
06/24/75	400907	889.0	
08/08/77	515235	881.0	
04/24/79	595681	860.0	
09/29/81	689753	1030.0	
09/22/83	738508	1014.0	
06/07/85	794689	824.0	
05/12/88	879454	944.0	
06/08/90	945098	992.0	
08/06/92	1006829	792.0	-current

San Juan 28-6 Unit #141M

Mesaverde / Dakota

28N-06W-36D



**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.