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

APPLICATION FOR DOWNHOLE COMMINGLING

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

APPROVAL PROCESS:

X Administrative ___Hearing

EXISTING WELLBORE

__ YES __x_ NO

Burlington Resources Oil & Gas Company P			Box 4289, Farmington, NM 87499		
Operator	Ad	dress			
San Juan 28-5 Unit	60M E :	29-28-5 F	Rio Arriba County Spacing Unit Lease Types: (check 1 or more) alx, State(and/or) Fee		
Lease		· ·			
OGRID NO14538 Property C	28d87460 AFT NO.30-03	9-200401 000; u:			
The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower		
Pool Name and Pool Code	Blanco Mesaverde - 72319		Basin Dakota - 71599		
Top and Bottom of Pay Section (Perforations)	will be supplied upon completion	DECEIVEN	will be supplied upon completion		
Type of production (Oil or Gas)	gas	LN MAR 3 1 1997	gas		
Method of Production (Flowing or Artificial Lift)	flowing	OIL COM. DIV.	flowing		
5. Bottomhole Pressure Oil Zones - Artificial Lift:	(Current) a. 656 psi (see attachment)	a. DISE 3	a. 922 psi (see attachment)		
Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Original) b. 1148 psi (see attachment)	b.	b. 2473 psi (see attachment)		
6. Oil Gravity (°API) or Gas BTU Content	BTU 1176		BTU 1019		
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	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:		

DISTRICT I

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

DISTRICT II

811 South First St., Artesia, NM 88210-2835

DISTRICT III

All Gas Zones:
Estimated or Measured Original

6. Oil Gravity (^oAPI) or Gas BTU Content

7. Producing or Shut-In?

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:

X Administrative ___Hearing

b. 2473 psi (see attachment)

BTU 1019

shut in

EXISTING WELLBORE

APPLICATION FOR DOWNHOLE COMMINGLING 1000 Rio Brazos Rd, Aztec, NM 87410-1693 __ YES __x_ NO **Burlington Resources Oil & Gas Company** PO Box 4289, Farmington, NM 87499 Address 60M E 29-28-5 Rio Arriba San Juan 28-5 Unit Well No. Unit Ltr. - Sec - Twp - Rge County Specing Unit Lesse Types: (check 1 or more) __ Property Code __7460____ API_NO_30-039-25646 State (and/or) Fee Federal Intermediate Zone The following facts are submitted in support of downhole commingling: Salar Salar - Aday 🐐 Blanco Mesaverde - 72319 Basin Dakota - 71599 Pool Name and Pool Code will be supplied upon completion will be supplied upon completion 2. Top and Bottom of Pay Section (Perforations) 3. Type of production (Oil or Gas) gas MAR 3 1 1997 flowing 4. Method of Production (Flowing or Artificial Lift) flowing (ON). DIV. (Current) a. 656 psi (see attachment) a. 922 psi (see attachment) 5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current

(Original) b. 1148 psi (see attachment)

BTII 1176

shut in

Production Marginal? (yes or no)	no		yes	ı
* If Shut-In and oil/gas/water rates	Date: n/a	Date:	Date: n/a	
of last production	Rates:	Rates:	Rates:	
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data				
* If Producing, give data and	Date: n/a	Date:	Date: n/a	İ
oil/gas/water water of recent test (within 60 days)	Rates:	Rates:	Rates:	
(
8. Fixed Percentage Allocation	Oil: Gas:	Oil: Gas: %	Oil: Gas:	
Formula -% for each zone (total of %'s to equal 100%)			will be supplied upon completion	İ
	will be supplied upon completion		with the statement again, controlled	İ
If allocation formula is based attachments with supporting data.	upon something other than curr ata and/or explaining method and	ent or past production, or is ba providing rate projections or oth	sed upon some other method, su er required data.	pmi,
10. Are all working, overriding, and If not, have all working, overridi Have all offset operators been o	royalty interests identical in all c ng, and royalty interests been no given written notice of the propos	ommingled zones? tified by certified mail? ed downhole commingling?	Yesx_No Yesx_No _x_YesNo	
11 Will cross-flow occur? x		ompatible, will the formations n	ot be damaged, will any cross-flo	owe
12. Are all produced fluids from all	commingled zones compatible wi	th each other? x_ Yes	No	
13. Will the value of production be d				
14. If this well is on, or communitize of Land Management has been n	zed with, state or federal lands, ootified in writing of this application	either the Commissioner of Pub onXYes No	lic Lands or the United States Bu	rea
15. NMOCD Reference Cases for Ru	ale 303(D) Exceptions: ORDER N	O(S)Reference Order R-106	95 attached	
16. ATTACHMENTS: * C-102 for each zone to the curve for t	to be commingled showing its space ach zone for at least one year. oduction history, estimated production method or formula. offset operators.	acing unit and acreage dedication (If not available, attach explanati action rates and supporting data.	n. on.)	
* Notification list of wo * Any additional staten	orking, overriding, and royalty intended in the next of the next o	erests for uncommon interest cased to support commingling.	ses.	
I hereby certify that the inform				
SIGNATURE Sean Was	KertonTITLE_Produ	ction EngineerDAT	E	
TYPE OR PRINT NAME Sean	Woolverton TELEPHO	ONE NO. (505) 326-970	0	

District 4 PO Box 1980, Hobbs, NM 88241-1980 PO Drawer DD. Artesia. NM 88211-0719

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

PO Box 2088, Santa Fe. NM #7504-2088

API Number

State of New Mexico Energy, Minerais & Natural Resources Department

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe. NM 87504-2088

Form C-102 Revised February 21, 1994

Instructions on back

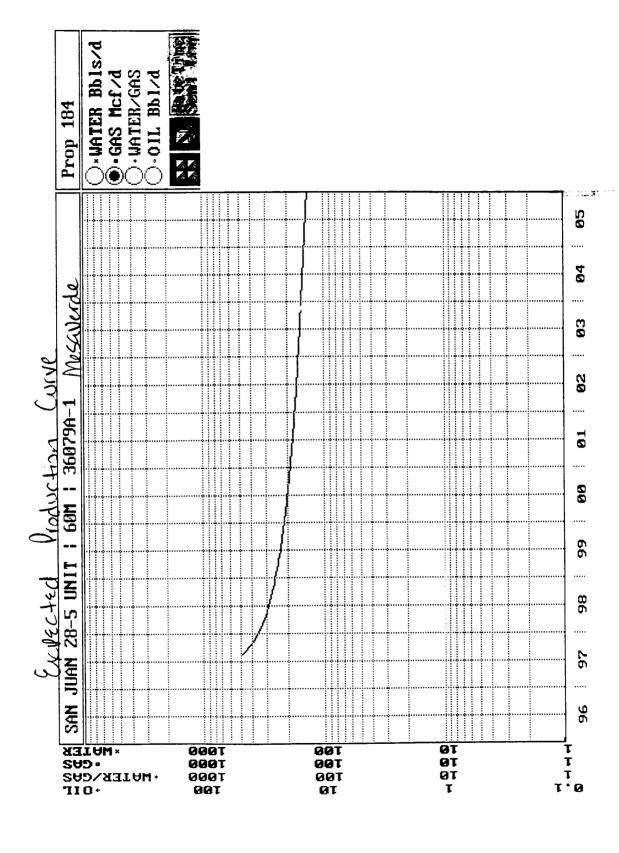
Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

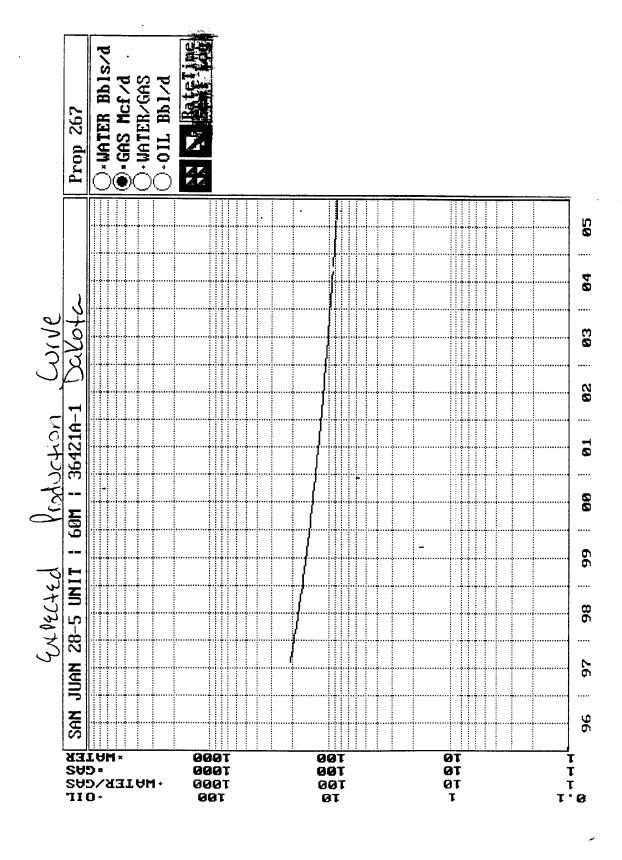
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

Pool Code

30-039			723	19/715	599 B	lanco Mesav	erde/Basi	n Dakota	
' Property	Code	³ Property Name					· Well Number		
7460		San Juan 28-5 Unit					60M		
OGRID	No.				¹ Operate			1	* Eleveuse
14538			BURLI	NGTON		S OIL & GAS	COMPANY	6	605'
					10 Surrace	Location			
UL or lot se.	Section	Townsip	Range	Lot ida	Feet from the	North/South line	Feet from the	East/West tipe	County
E	29	28-N			1850	North	790	West	R.A.
			11 Bot	tom Hol	e Location	If Different Fro	om Surface		
UL or lot so.	Section	Townsaip	Range	Lot ida	Feet from the	North/South line	Feet from the	East West time	County
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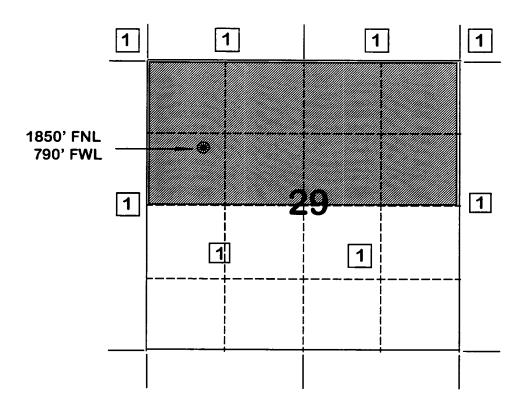


BURLINGTON RESOURCES OIL AND GAS COMPANY

San Juan 28-5 Unit #60M OFFSET OPERATOR \ OWNER PLAT

Mesaverde/Dakota Formations Commingle Well

Township 28 North, Range 5 West



1) Burlington Resources Oil and Gas Company

FLOWING AND STATIC BHP CULLENDER AND SMITH METHOD

VERSION 1.0 3/13/94

0.687
C
0.2
0.85
0
2.375
6138
60
150
0
562
655.8

FLOWING AND STATIC BHP CULLENDER AND SMITH METHOD

VERSION 1.0 3/13/94

GAS GRAVITY	0.687
COND. OR MISC. (C/M)	С
%N2	0.2
%CO2	0.85
%H2S	0
DIAMETER (IN)	2.375
DEPTH (FT)	6138
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	973
BOTTOMHOLE PRESSURE (PSIA)	1148.4

SAN JUAN 28-5 UNIT #1 MESAVERDE - ORIGINAL

FLOWING AND STATIC BHP CULLENDER AND SMITH METHOD

VERSION 1.0 3/13/94

GAS GRAVITY	0.593
COND. OR MISC. (C/M)	С
%N2	0.12
%CO2	1.38
%H2S	0
DIAMETER (IN)	2.375
DEPTH (FT)	7942
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	Ō
SURFACE PRESSURE (PSIA)	782
BOTTOMHOLE PRESSURE (PSIA)	921.7

FLOWING AND STATIC BHP CULLENDER AND SMITH METHOD

VERSION 1.0 3/13/94

GAS GRAVITY	0.593
COND. OR MISC. (C/M)	C
%N2	0.12
%CO2	1.38
%H2S	0
DIAMETER (IN)	2.375
DEPTH (FT)	7942
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	2069
BOTTOMHOLE PRESSURE (PSIA)	2473.0

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Page No.: 1
                                                  SJ 28-5 #60M
Nescuerde Offset
   Print Time: Wed Mar 26 11:11:00 1997
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Property Name: SAN JUAN 28-5 UNIT | 1 | 49327A-1
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12/08/55
                13000
08/30/56
                37000
                        844.0
07/30/57
                        807.0 .
                84000
11/06/58
                        749.0
               136000
06/14/59
               168000
                        851.0
               213000
                        833.0
06/14/60
                        916.0 = suspect Data
06/15/60
                    0
12/06/60
                        787.0
               239000
06/13/61
               267000
                        790.0
07/13/62
               308000
                        819.0
05/06/63
               343000
                        800.0
04/22/64
               373000
                        810.0
06/21/65
               420000
                        799.0
05/23/66
               452000
                        844.0
05/26/67
                        748.0
               493000
05/20/68
                        725.0
               538000
08/14/70
                        777.0
               617622
04/27/71
                        822.0
               631284
05/15/72
               686353
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04/19/74
               772118
                        632.0
02/09/80
               847836
                        812.0
                        812.0
12/22/80
               861389
                        721.0
05/31/82
               916209
                        722.0
05/01/84
               969425
                        705.0
04/16/86
              1022759
10/18/89
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              1159064
06/17/91
              1212464
                        640.0
                        652.0
07/22/91
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07/27/93
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Page No.: 1

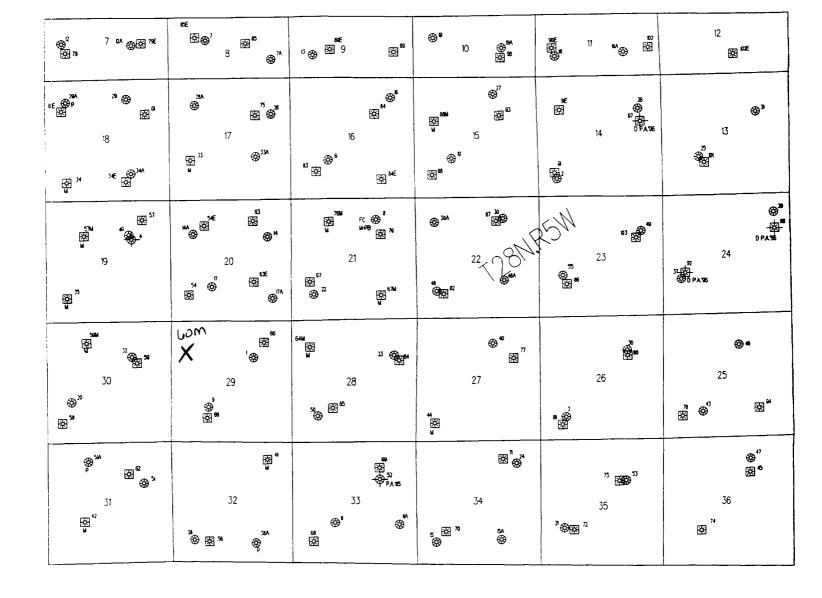
Princ Time: Fri Mar 21 15:05:19 1997

Property ID: 1778

Property Name: SAN JUAN 28-5 UNIT | 60 | 50694A-1 Dakota Offsel Table Name: K:\ARTES\RP97DDD\TEST DEF

Table Name: K:\ARIES\RR97PDP\TEST.DBF

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--DATE-- ---CUM GAS-- M SIWHP
Mcf.....Psi
                      2069.0 - original
11/29/62
04/28/63
                59000 1844.0
04/22/64
                      1755.0
              259000
01/04/65
              315000 1949.0
05/23/66
              620000 1945.0
              869000 1412.0
05/26/67
              1084000 1416.0
05/20/68
05/15/69
              1359583 1124.0
              1609494 1088.0
06/19/70
04/27/71
              1772012
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05/15/72
             1975467
                      1059.0
07/05/73
              2227884
                        938.0
04/30/75
              2515249
                        921.0
06/01/77
              2757933
                        924.0
05/01/79
              2942223
                        910.0
05/04/81
              3114533
                        890.0
                        903.0
09/19/83
              3229436
                        905.0
06/04/85
              3321764
10/23/88
              3475228
                        882.0
06/29/90
              3564454
                        920.0
                        782.0← wirent
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              3628052
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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. 11627 ORDER NO. R-10695

APPLICATION OF BURLINGTON RESOURCES
OIL & GAS COMPANY FOR THE ESTABLISHMENT
OF A DOWNHOLE COMMINGLING "REFERENCE
CASE" FOR ITS SAN JUAN 28-5 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 28-5 Unit, San Juan County, New Mexico.

(3) Division Rule No. 303.E., amended by Order No. R-10470-A, currently states:

"If sufficient data exists on a lease, pool, formation, geographic area, etc., so as to render it unnecessary to repeatedly provide such data on Form C-107-A, an operator may except any of the various criteria required under Paragraph 303.D, of this rule by establishing a "reference case". The Division, upon its own motion, or by application from an operator, may establish "reference cases" either administratively or by hearing. Upon Division approval of such "reference cases" for specific criteria, subsequent applications to downhole commingle (Form C-107-A) will be required only to cite the Division order number which established such exceptions and shall not be required to submit data for those criteria."

- (4) The applicant is the current operator of the San Juan 23-5 Unit which encompasses some 17,399 acres in Township 28 North, Range 5 West, NMPM, San Juan County, New Mexico.
- (5) Within the San Juan 28-5 Unit, the applicant currently operates sixty-seven (67) Basin-Dakota Gas Pool wells, seventy-one (71) Blanco-Mesaverde Gas Pool wells, sixteen (16) Gobernador-Pictured Cliffs, Oso-Pictured Cliffs and Tapacito-Pictured Cliffs Gas Pool wells, and nineteen (19) Basin-Fruitland Coal Gas Pool wells.
 - (6) According to its evidence and testimony, Burlington seeks to:
 - establish a "reference case" for marginal economic criteria in the Dakota and Pictured Cliffs formations whereby these formations and/or pools may be identified as "marginal" on Form C-107-A's subsequently filed for wells within the San Juan 28-5 Unit. The applicant further proposes that the data provided in the immediate case serve as supplemental data or confirmation that these formations and/or pools should be classified as "marginal";
 - b) establish a "reference case" for pressure criteria in the Dakota and Pictured Cliffs formations whereby the Division may utilize data provided in the immediate case to verify the pressure data provided on Form C-107-A's subsequently filed for wells within the San Juan 28-5 Unit:

- 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 28-5 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 28-5 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 28-5 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 1.258 MMCFG and 77 MMCFG, respectively;
 - c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 276 MCFGD and 136 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 28-5 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 28-5 Unit, the applicant presented engineering evidence and testimony which indicates that:

- a) the average shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations at the time of initial development were approximately 3.149 psi and 1.143 psi, respectively; and.
- b) the average current shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations are approximately 1.059 psi and 714 psi, respectively.
- (10) There is sufficient pressure data available within the San Juan 28-5 Unit so as to except pressure criteria as proposed by the applicant.
- (11) The applicant testified that various allocation methods will be utilized for downhole commingled wells within the San Juan 28-5 Unit depending on the circumstances. Some of the methods and circumstances are described as follows:
 - a) the subtraction method will likely be utilized in those instances involving the Basin-Fruitland Coal Gas Pool and in those instances where a zone with a well established decline rate is commingled with a newly completed zone:
 - b) a fixed allocation formula will be utilized in those instances where production history for both zones is available, or in those instances where newly completed zones are tested and stabilized flow rates obtained.
 - (12) The ailocation methods proposed by the applicant are routinely utilized by industry and approved by the Division and therefore, the proposal to except allocation formulas should be approved.
 - (13) In support of its request to establish a "reference case" or administrative procedure for providing notice within the San Juan 28-5 Unit the applicant presented evidence and testimony which indicates that:
 - a) the interest ownership between two zones within a given wellbore in the San Juan 28-5 Unit is generally not common:
 - b) pursuant to Division Rule No. 303.D., applicant is currently required to notify all interest owners within the San Juan 28-5 Unit every time a Form C-107-A is submitted to the Division. There are a considerable number of such interest owners within the unit:

- c) providing notice to each interest owner within the San Juan 28-5 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 28-5 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 28-5 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 28-5 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 comminging approvals within the San Juan 28-5 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 28-5 Unit, San Juan County, New Mexico, is hereby approved.

- (2) Upon filing of Division Form No. C-107-A's for wells subsequently downhole commingled within the San Juan 28-5 Unit Area, the applicant shall not be required to submit supporting data to justify the classification of the Pictured Cliffs and Dakota formations as "marginal", supporting data to verify the Pictured Cliffs and Dakota pressure information provided, and support or justification for utilizing a given method or formula for allocation of production, provided however, in the event any of the data described above appearing on Form C-107-A appears to be beyond the data range provided in this case, the Division may require the submittal of additional supporting data.
- (3) In order to obtain Division authorization to downhole commingle wells within the San Juan 28-5 Unit, the applicant shall file a Form C-107-A with the Santa Fe and Aztec Offices of the Division. Such application shall contain all the information required under Rule No. 303.C. of the Division Rules and Regulations, provided however that the applicant shall not be required to provide notice to all interest owners within the San Juan 28-5 Unit of such proposed commingling.
- (4) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY

Director

S E A L