

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 **SAN JUAN 29-7 UNIT** Address **50A O 21--29N-7W** **Rio Arriba**

Lease Well No. Unit Ltr. - Sec - Twp - Rge County Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7465 API NO. 30-039-25643 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. 777 psi (see attachment)	a.	a. 965 psi (see attachment)
	(Original) b. 1251 psi (see attachment)	b.	b. 2648 psi (see attachment)
6. Oil Gravity (^o API) or Gas BTU Content	BTU 1159		BTU 1008
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 <small>Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data</small>	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:
* If Producing, give data and oil/gas/water 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-10697
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 05/27/97

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 DD, Artesa, 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-1
 Revised February 21, 1990
 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 30-039-25643		Pool Code 72319/71599		Pool Name Blanco Mesaverde/Basin Dakota	
Property Code 7465		Property Name San Juan 29-7 Unit			Well Number 50A
OGRID No. 14538		Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			Elevation 6786'

10 Surface Location

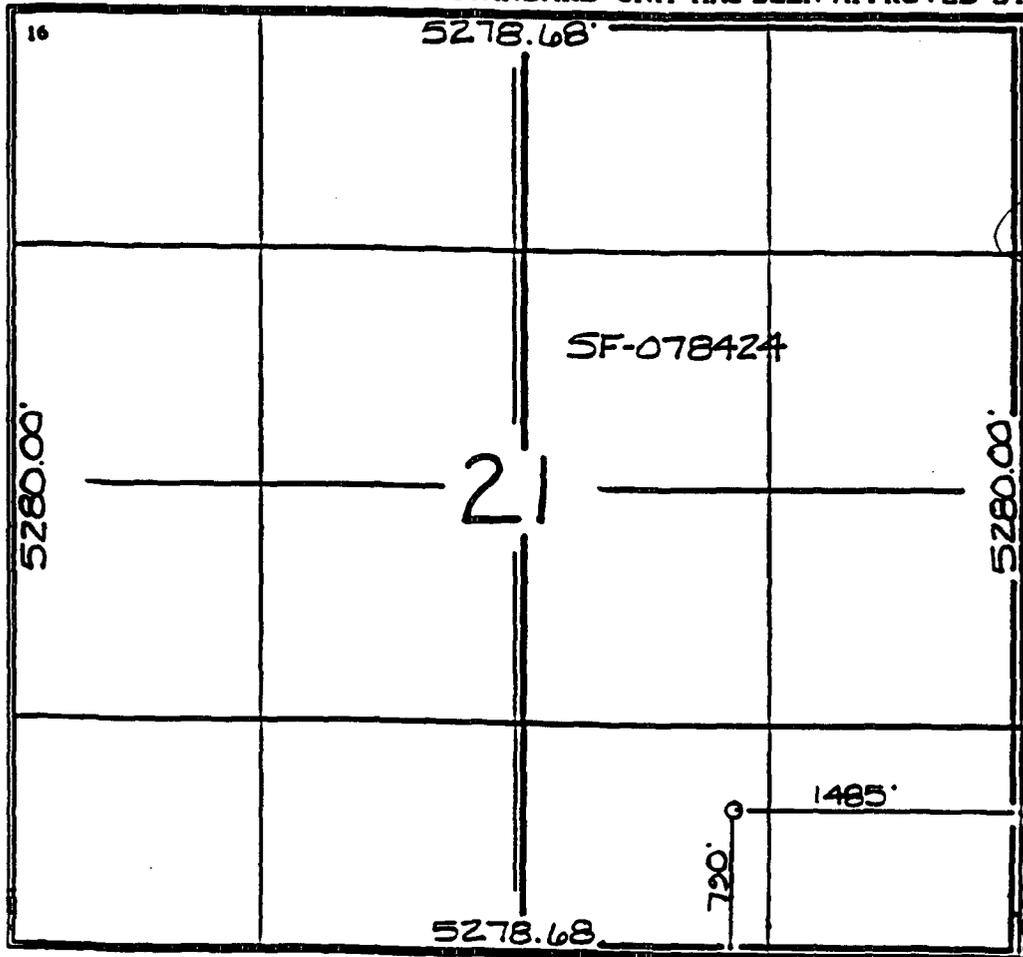
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
0	21	29-N	7-W		790	South	1485	East	R.A.

11 Bottom Hole Location If Different From Surface

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

12 Dedicated Acreage MV-E/320 DK-E/320	13 Joint or Infill	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



17 OPERATOR CERTIFICATE

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

Perry Bradfield
 Signature
 Perry Bradfield
 Print Name
 Regulatory Administrator
 Title
 1-17-97
 Date

18 SURVEYOR CERTIFICATE

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

11/13/96
 Date of Survey

Signature and Seal of Professional Surveyor

 6857
 Certificate Number

Blanco Nevada

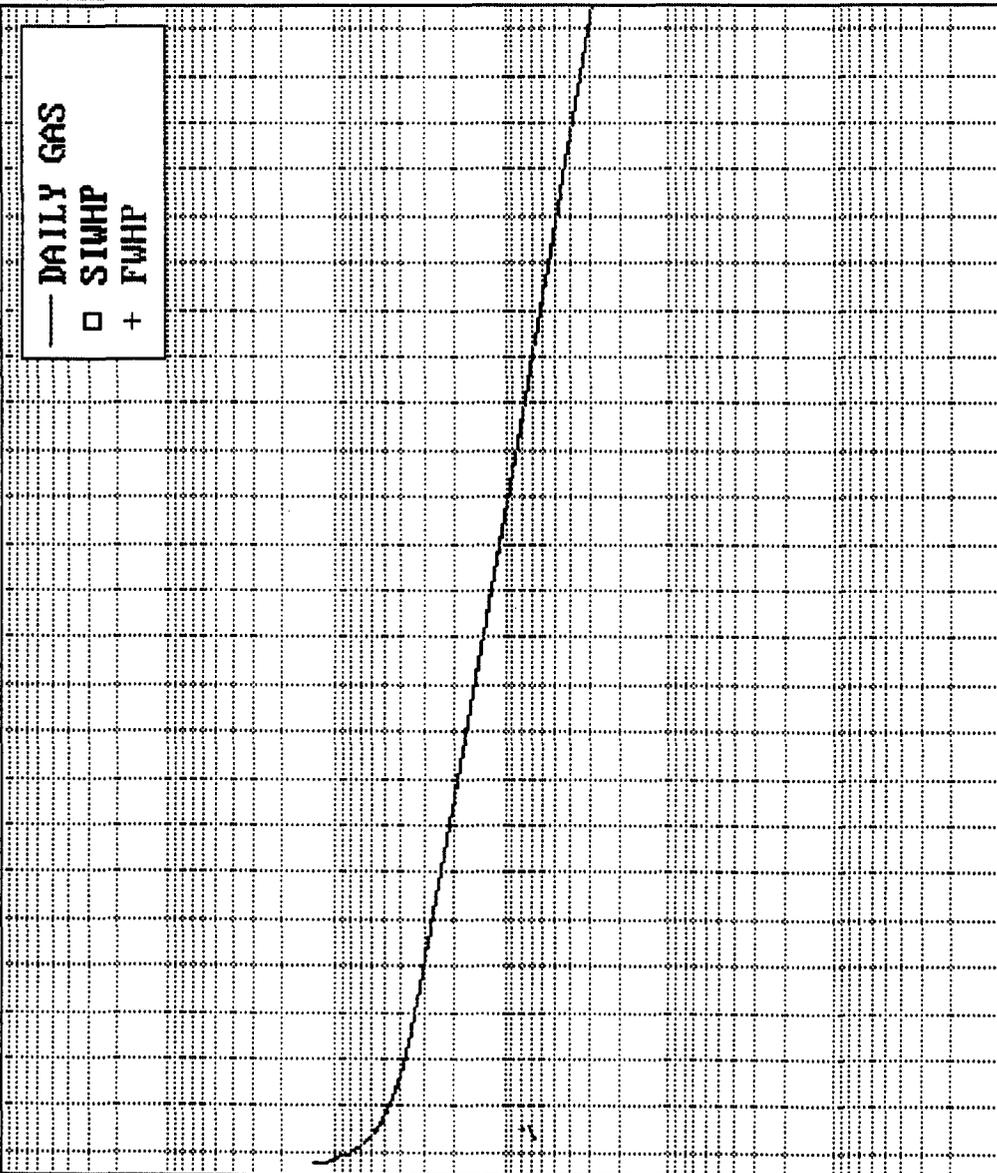
SAN JUAN 29-7 UNIT : 50A : 36127A-1

* WATER 10000
 * OIL/GAS 1000
 * OIL 1000
 * GAS 10000

Prop 189

- GAS Mcf/d
 - OIL Bbl/d
 - OIL/GAS
 - WATER Bbls/d
-  Rate Time
 Semi Log

— DAILY GAS
 □ SIMHP
 + FWHP



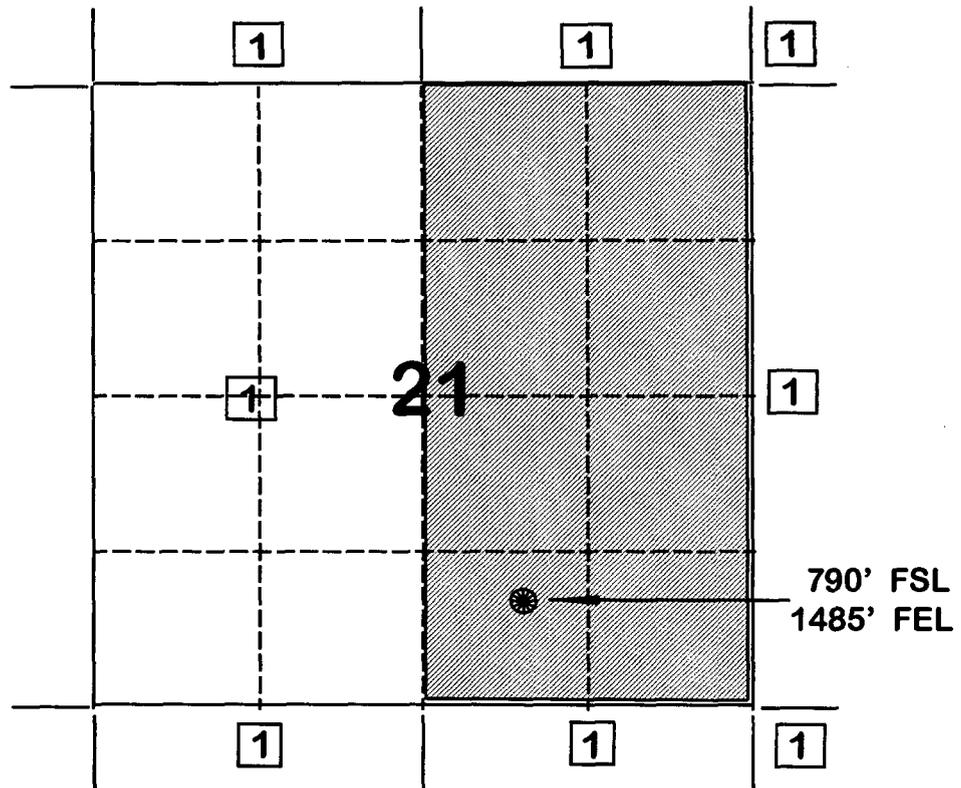
98 00 02 04 06 08 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

BURLINGTON RESOURCES OIL AND GAS COMPANY

**San Juan 29-7 Unit #50A
OFFSET OPERATOR \ OWNER PLAT**

Mesaverde/Dakota Formations Commingle Well

Township 29 North, Range 7 West



1) Burlington Resources Oil and Gas Company

**San Juan 29-7 Unit #50A
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	<u>0.678</u>	GAS GRAVITY	<u>0.59</u>
COND. OR MISC. (C/M)	<u>C</u>	COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.37</u>	%N2	<u>0.14</u>
%CO2	<u>0.87</u>	%CO2	<u>1.59</u>
%H2S	<u>0.00</u>	%H2S	<u>0.00</u>
DIAMETER (IN)	<u>2.375</u>	DIAMETER (IN)	<u>2.375</u>
DEPTH (FT)	<u>5378</u>	DEPTH (FT)	<u>7943</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>	SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>141</u>	BOTTOMHOLE TEMPERATURE (DEG F)	<u>187</u>
FLOWRATE (MCFPD)	<u>0</u>	FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>677</u>	SURFACE PRESSURE (PSIA)	<u>817</u>
BOTTOMHOLE PRESSURE (PSIA)	776.5	BOTTOMHOLE PRESSURE (PSIA)	964.8
<u>MV-Original</u>		<u>DK-Original</u>	
GAS GRAVITY	<u>0.678</u>	GAS GRAVITY	<u>0.59</u>
COND. OR MISC. (C/M)	<u>C</u>	COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.37</u>	%N2	<u>0.14</u>
%CO2	<u>0.87</u>	%CO2	<u>1.59</u>
%H2S	<u>0.00</u>	%H2S	<u>0.00</u>
DIAMETER (IN)	<u>2.375</u>	DIAMETER (IN)	<u>2.375</u>
DEPTH (FT)	<u>5378</u>	DEPTH (FT)	<u>7943</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>	SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>141</u>	BOTTOMHOLE TEMPERATURE (DEG F)	<u>187</u>
FLOWRATE (MCFPD)	<u>0</u>	FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>1081</u>	SURFACE PRESSURE (PSIA)	<u>2212</u>
BOTTOMHOLE PRESSURE (PSIA)	1251.3	BOTTOMHOLE PRESSURE (PSIA)	2647.5

DIC

Page No.: 1

Print Time: Tue May 20 09:53:17 1997

Property ID: 2098

Property Name: SAN JUAN 29-7 UNIT | 130 | 1517-1

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

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

09/13/85	0	2212.0	← initial
12/09/85	31267	1512.0	
10/03/86	58835	1279.0	
10/11/87	108144	879.0	
09/04/88	140560	832.0	
08/07/90	205466	743.0	
05/28/92	243176	817.0	← current

Page No.: 1

Print Time: Tue May 20 09:49:16 1997

Property ID: 4431

Property Name: SAN JUAN 29-7 UNIT | 50 | 69647-1

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

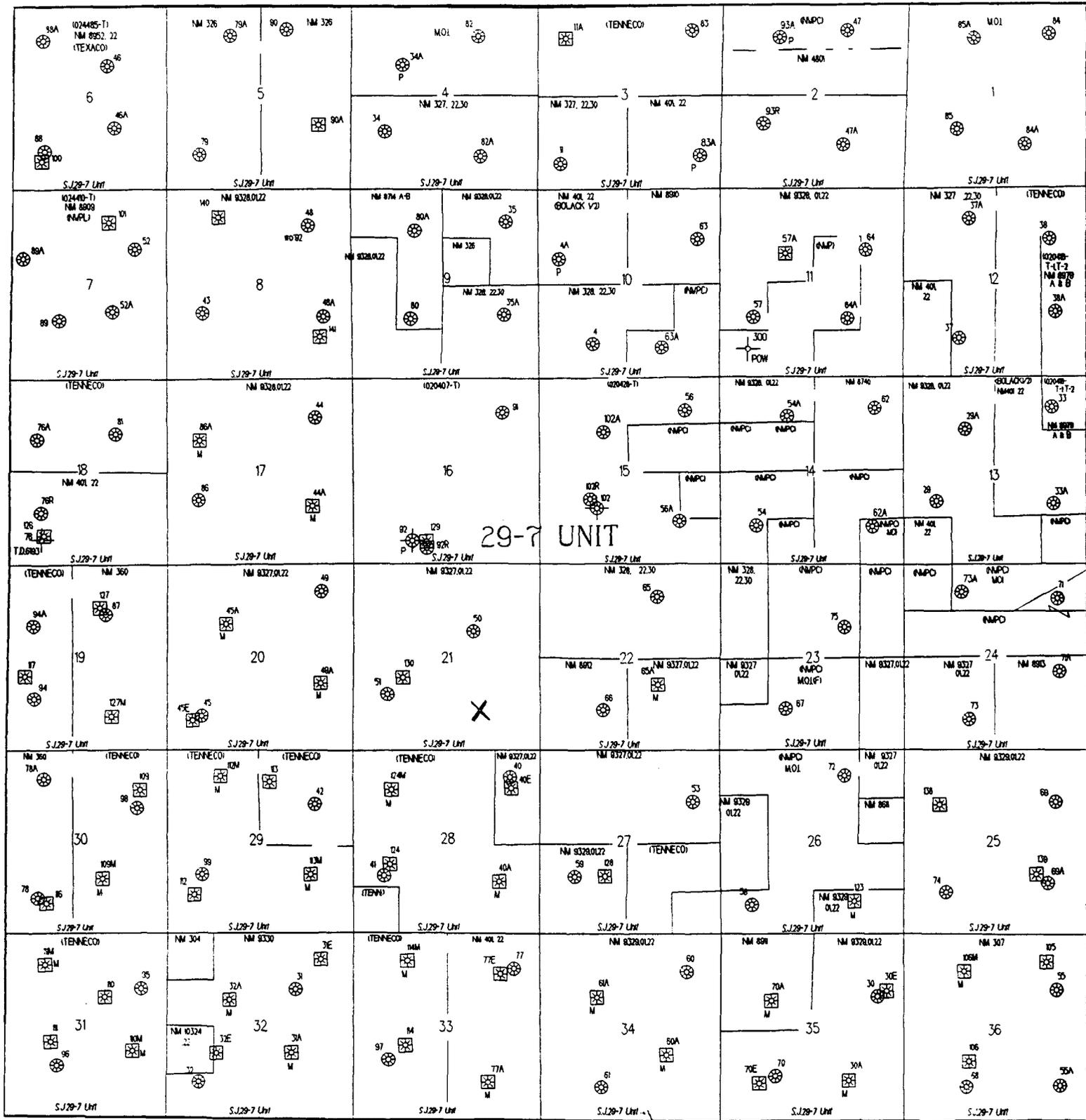
MV

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

09/17/56	0	1081.0
10/24/56	0	1080.0
09/25/57	176000	799.0
09/06/58	357000	846.0
03/29/59	502000	778.0
03/06/60	683000	773.0
10/05/61	1001000	765.0
03/13/62	1078000	766.0
07/22/63	1285000	730.0
02/07/64	1332000	776.0
08/20/65	1634000	719.0
11/03/66	1900000	669.0
03/03/67	1965000	713.0
03/14/67	0	0.0
08/18/67	2095000	646.0
03/05/68	2189000	687.0
04/06/69	2436110	655.0
03/03/70	2629730	635.0
06/02/71	2876663	612.0
08/15/72	3165831	577.0
07/09/73	3374915	574.0
08/21/74	3590014	585.0
04/20/76	3888187	619.0
05/16/78	4252046	597.0
07/29/80	4518631	637.0
05/13/82	4643165	690.0
08/21/84	4729137	717.0
10/03/86	4822061	727.0
04/14/89	5025309	665.0
04/15/91	5147423	665.0
07/15/91	5154159	677.0

← initial

← 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. 11629
ORDER NO. R-10697

APPLICATION OF BURLINGTON RESOURCES
OIL & GAS COMPANY FOR THE ESTABLISHMENT
OF A DOWNHOLE COMMINGLING "REFERENCE
CASE" FOR ITS SAN JUAN 29-7 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 8th 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 29-7 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 29-7 Unit which encompasses some 22,500 acres in Township 29 North, Range 7 West, NMPM, San Juan County, New Mexico.

(5) Within the San Juan 29-7 Unit, the applicant currently operates fifty-five (55) Basin-Dakota Gas Pool wells, one hundred thirty-one (131) Blanco-Mesaverde Gas Pool wells, thirteen (13) Blanco-Pictured Cliffs and South Blanco-Pictured Cliffs Gas Pool wells, and forty-nine (49) Basin-Fruitland Coal Gas Pool wells.

(6) According to its evidence and testimony, Burlington seeks to:

- a) 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 29-7 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 29-7 Unit;
- 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 29-7 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 29-7 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 29-7 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 245 MMCFG and 76 MMCFG, respectively;
- c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 218 MCFGD and 238 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 29-7 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 29-7 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 was approximately 3,209 psi and 1,148 psi, respectively; and,
- b) the average current shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations is approximately 952 psi and 655 psi, respectively.

(10) There is sufficient pressure data available within the San Juan 29-7 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 29-7 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 allocation 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 29-7 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 29-7 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 29-7 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 29-7 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 29-7 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 29-7 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 29-7 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 29-7 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 29-7 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 29-7 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.

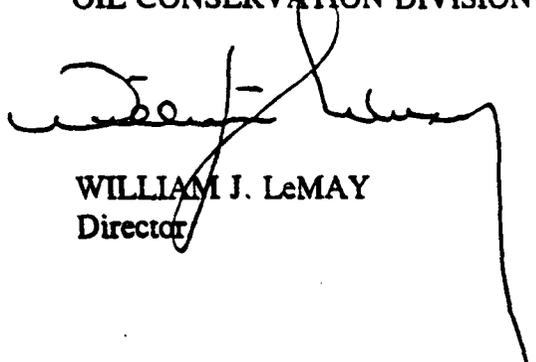
(3) In order to obtain Division authorization to downhole commingle wells within the San Juan 29-7 Unit, the applicant shall file a Form C-107-A with the Santa Fe and Aztec Offices of the Division. Such application shall contain all the information required under Rule No. 303.C. of the Division Rules and Regulations, provided however that the applicant shall not be required to provide notice to all interest owners within the San Juan 29-7 Unit of such proposed commingling.

CASE NO. 11629
Order No. R-10697
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(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