

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240  
DISTRICT II  
811 South First St., Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd, Aztec, NM 87410  
DISTRICT IV  
2040 S. Pacheco, Santa Fe, NM 87505

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  
Revised August 1999

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

105

K 35-28N-06W

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. 30-039-07222 Federal ☒ State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling: 1. Pool Name and Pool Code	Upper Zone BLANCO MESAVERDE - 72319	Intermediate Zone	Lower Zone BASIN DAKOTA - 71599
2. Top and Bottom of Pay Section (Perforations)	WILL BE SUPPLIED UPON COMPLETION	RECEIVED NOV 30 1999	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	a. (Current) 721 psi (see attachment) b. (Original) 1268 psi (see attachment)	a. (Current)  b. (Original)  	a. (Current) 956 psi (see attachment) b. (Original) 3167 psi (see attachment)
6. Oil Gravity (EAPI) or Gas BTU Content	BTU 1223		BTU 1071
7. Producing or Shut-In?	SHUT-IN		SHUT-IN
Production Marginal? (yes or no) * 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 * If Producing, give date and oil/gas/water rates of recent test (within 60 days)	NO Date: N/A Rates:  Date: N/A Rates:	 Date: N/A Rates:  Date: N/A Rates:	YES 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: % WILL BE SUPPLIED UPON COMPLETION	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

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 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 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

*Wayne Fletcher*

TITLE PRODUCTION ENGINEER

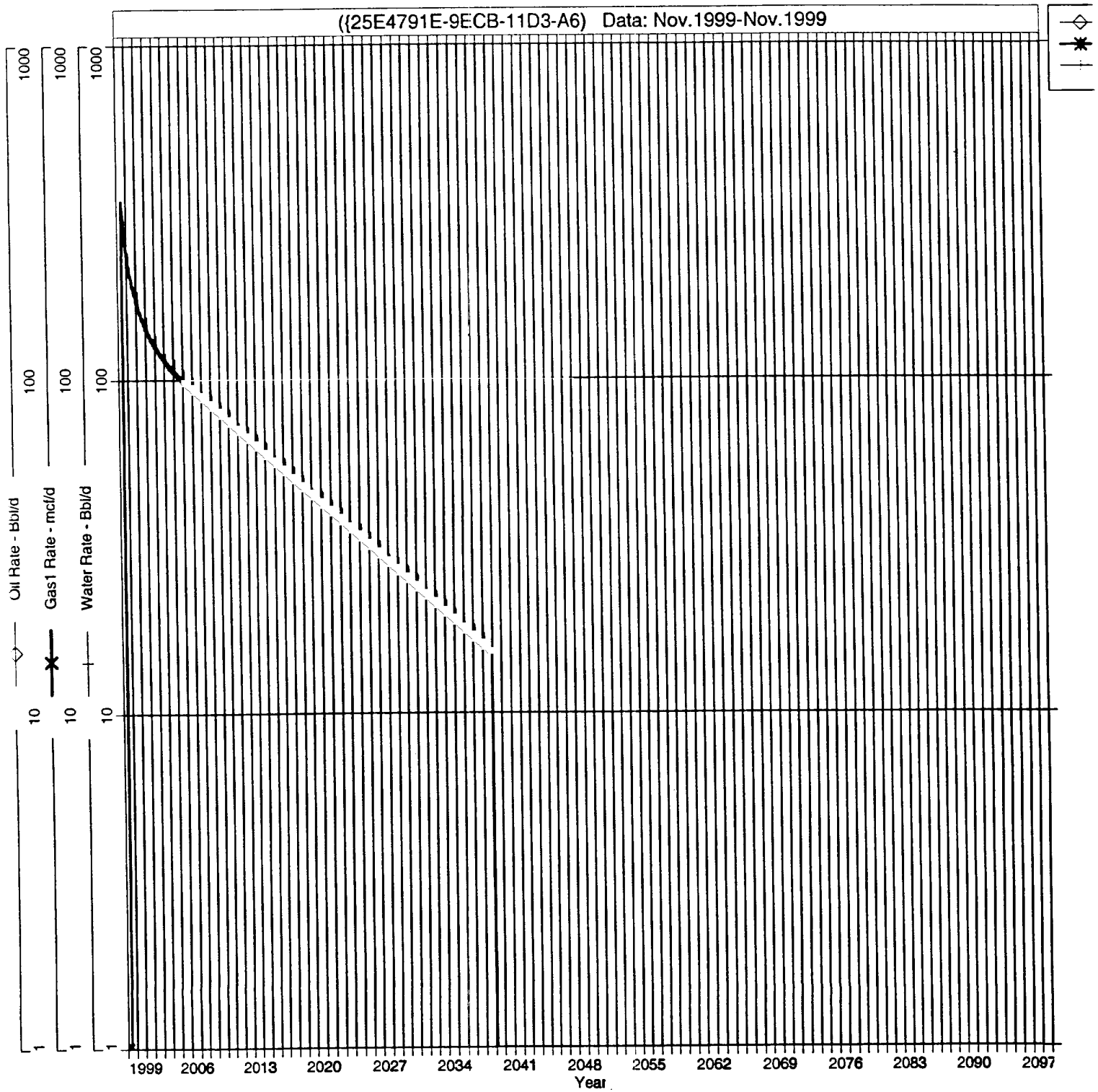
DATE: 11/29/99

TYPE OR PRINT NAME B. WAYNE FLETCHER

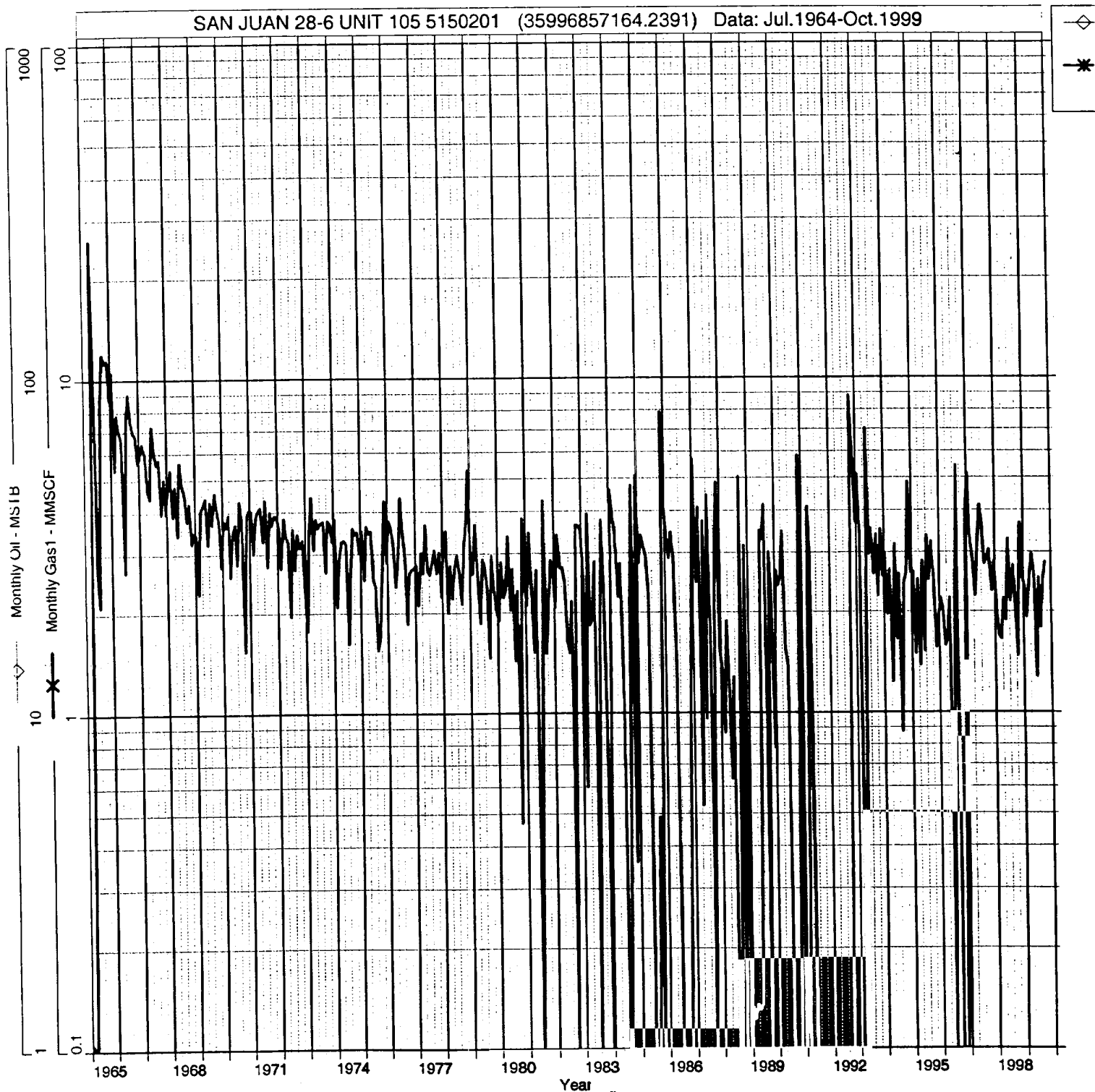
TELEPHONE NO. 505-326-9700

16				<b>17 OPERATOR CERTIFICATION</b> <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>
		Original plat from James C. Leese 6-9-64		Signature <u>Peggy Cole</u> Printed Name <u>Regulatory Administrator</u> Title Date
				<b>18 SURVEYOR CERTIFICATION</b> <i>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.</i>
1680'	1650'			Date of Survey Signature and Seal of Professional Surveyer:  Certificate Number

San Juan 28-6 Unit #105  
Expected Production  
Mesaverde Formation



San Juan 28-6 Unit #105  
Expected Production  
Dakota Formation



**San Juan 28-6 Unit #105**

Bottom Hole Pressures

Flowing and Static BHP

Cullender and Smith Method

Version 1.0 3/13/94

<b>Mesaverde</b>		<b>Dakota</b>	
<b><u>MV-Current</u></b>		<b><u>DK-Current</u></b>	
GAS GRAVITY	0.71	GAS GRAVITY	0.612
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.87	%N2	0.11
%CO2	0.78	%CO2	1.23
%H2S	0	%H2S	0
DIAMETER (IN)	1.25	DIAMETER (IN)	2
DEPTH (FT)	5616	DEPTH (FT)	7512
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)	620	SURFACE PRESSURE (PSIA)	813
BOTTOMHOLE PRESSURE (PSIA)	720.7	BOTTOMHOLE PRESSURE (PSIA)	956.1
<b><u>MV-Original</u></b>		<b><u>DK-Original</u></b>	
GAS GRAVITY	0.71	GAS GRAVITY	0.612
COND. OR MISC. (C/M)	C	COND. OR MISC. (C/M)	C
%N2	0.87	%N2	0.11
%CO2	0.78	%CO2	1.23
%H2S	0	%H2S	0
DIAMETER (IN)	1.25	DIAMETER (IN)	2
DEPTH (FT)	5616	DEPTH (FT)	7512
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)	1077	SURFACE PRESSURE (PSIA)	2661
BOTTOMHOLE PRESSURE (PSIA)	1268.3	BOTTOMHOLE PRESSURE (PSIA)	3167.2

Page No. : 3

Print Time: Fri Nov 19 15:11:12 1999

Property ID: 1940

Property Name: SAN JUAN 28-6 UNIT	88	50188A
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Table Name: R:\RESERVES\GDPNOS\TEST.DBF

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--DATE--  ---CUM GAS--  M SIWHP
|||||Mcft|||||Psi|||
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San Juan 28-6 Unit #105

## Mesaverde Offset

07/30/58	0	1077.0
10/13/58	0	1080.0
06/14/59	39000	977.0
06/14/60	145000	735.0
06/13/61	186000	748.0
05/29/62	254000	735.0
05/09/63	335000	709.0
05/20/64	414000	645.0
09/08/65	490000	620.0
04/12/66	518000	669.0
03/22/67	557000	656.0
10/10/68	625000	655.0
12/22/69	688638	591.0
05/25/70	716362	564.0
05/04/71	785483	516.0
05/22/72	847033	501.0
08/21/73	934555	368.0
07/31/74	990464	432.0
07/12/76	1106479	408.0
05/15/78	1169837	492.0
04/18/80	1241758	517.0
04/07/86	1382054	595.0
09/18/89	1461979	612.0
09/04/91	1481817	632.0
10/21/91	1485207	620.0

Page No.: 1

Print Time: Wed Nov 24 09:15:12 1999

Property ID: 7

Property Name: SAN JUAN 28-6 UNIT | 105 | 51502A

Table Name: C:\CMNG\TEST.DBF

--DATE-- ---CUM\_GAS-- M SIWHP  
.....Mcf.....Psi

07/29/64	0	2661.0
10/18/65	74000	1424.0
10/05/66	158000	1047.0
05/25/67	205000	909.0
05/27/68	264000	798.0
08/18/69	323242	718.0
07/28/70	362497	682.0
06/22/71	402366	633.0
06/07/72	443619	657.0
09/04/75	563947	740.0
08/01/77	632460	720.0
05/08/79	692813	707.0
10/13/81	758049	790.0
09/19/83	812166	789.0
05/20/85	860155	717.0
10/08/88	936092	813.0

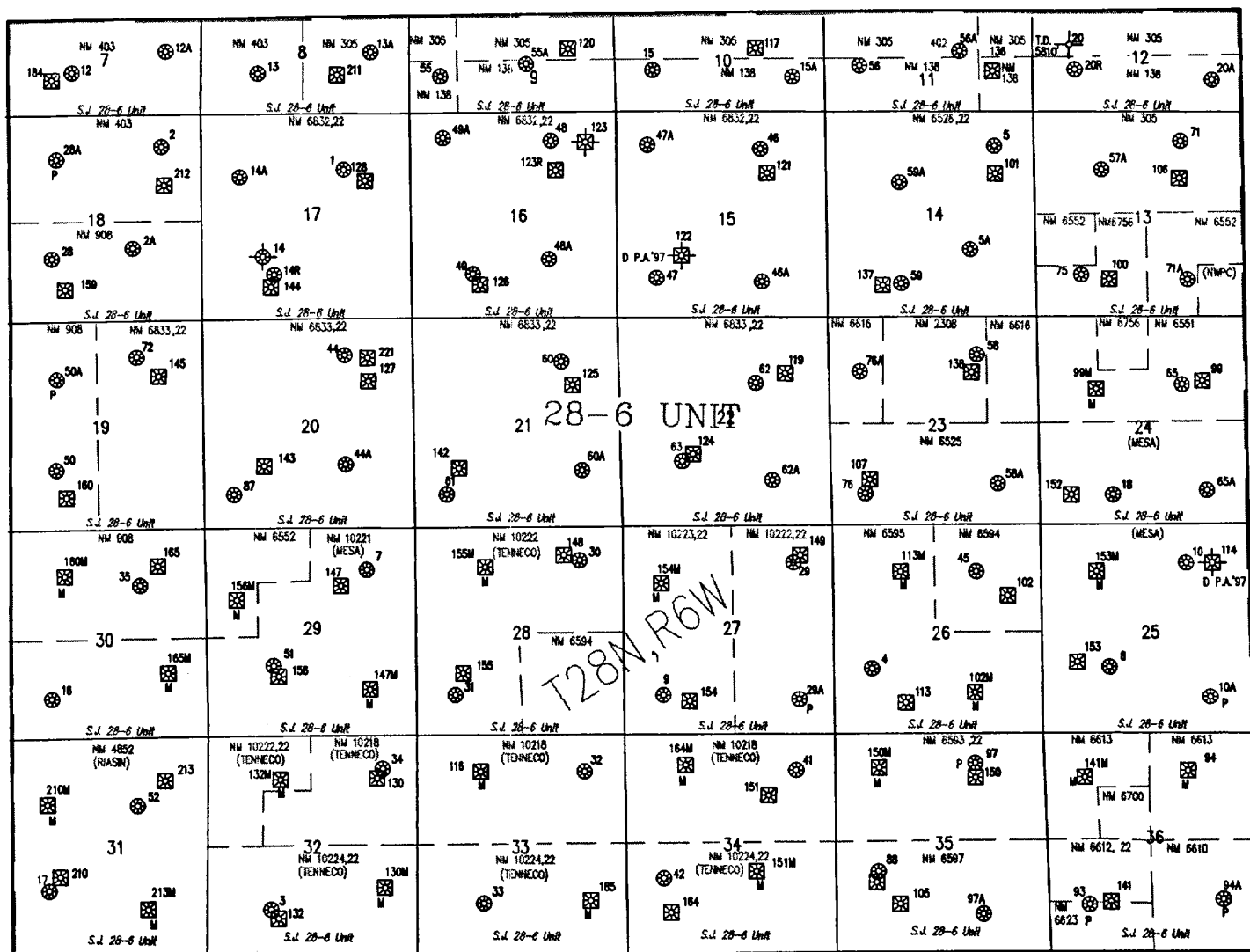
San Juan 28-6 Unit #105

Dakota Offset

# San Juan 28-6 Unit #105

Mesaverde / Dakota

28N - 6W - 35K





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.