

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 102M O 26-28-6 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. 30-039-25641 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. 628 psi (see attachment) (Original) b. 1138 psi (see attachment)		a. 1247 psi (see attachment) b. 3301 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1192		BTU 1038
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). Reference Order 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 James A. Smith TITLE Production Engineer DATE 3/27/97

TYPE OR PRINT NAME James A. Smith TELEPHONE NO. ( 505 ) 326-9700

District I  
PO Box 1989, Hobbs, NM 88241-1989  
District II  
PO Drawer 00, Aramis, NM 88211-0719  
District III  
1000 N. H. Brown Rd., Aztec, NM 87410  
District IV  
PO Box 1003, 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	Well Code	Well Name	Well Number
30-039-	72319/71599	Blanco Mesaverde/Basin Dakota	102M
Property Code	Property Name		
7462	San Juan 28-6 Unit		
OGRID No.	Operator Name		
14538	BURLINGTON RESOURCES OIL & GAS COMPANY		6697

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ids	Feet from the	North/South line	Feet from the	East/West line	County
0	26	28-N	6-W		1050	South	1700	East	R.A.

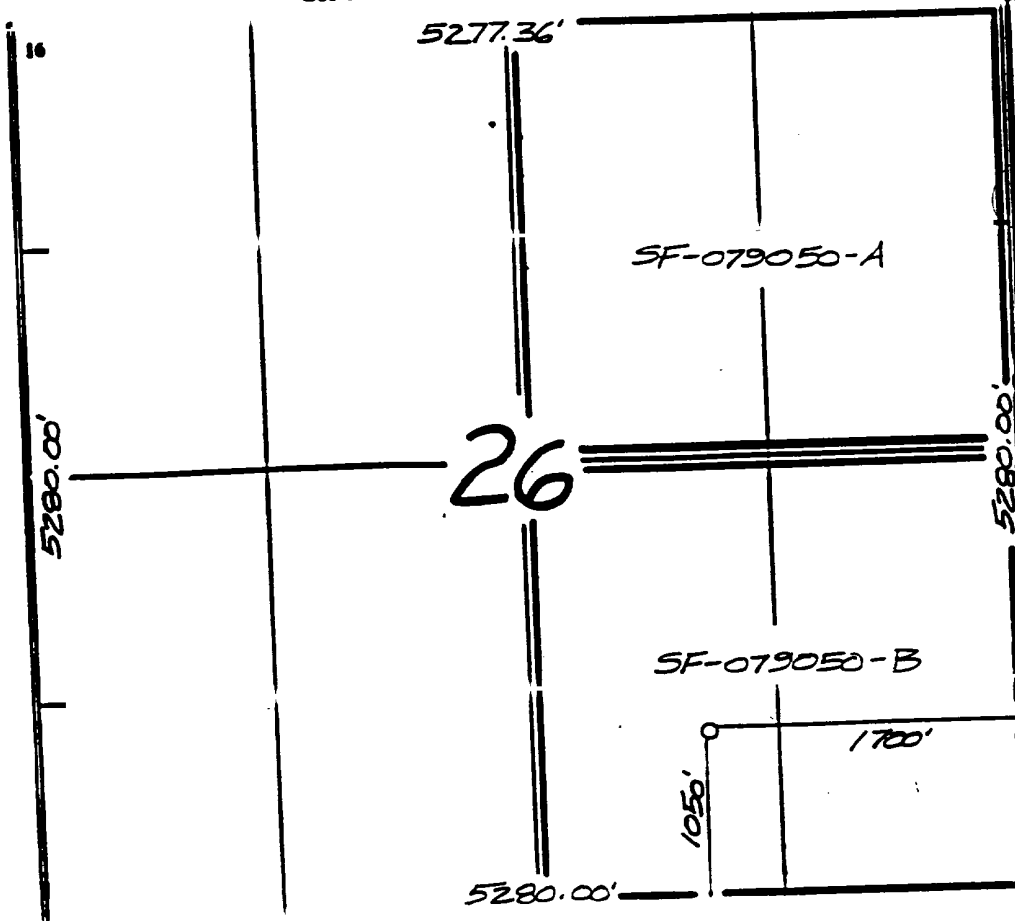
11 Bottom Hole Location if Different From Surface

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

12 Dedicated Acres 13 Joint or Infill 14 Consolidation Code 15 Order No.

E/320-E/320

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 CERTIFICATION

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

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

18 SURVEYOR CERTIFICATION

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.

10/16/96  
Date of Survey  
NE & C. EDWARDS  
Signature and Seal of Professional Surveyor  
8857  
8857  
Certificate Number

# Expected Production Curve

SAN JUAN 28-6 UNIT : 102M : 36599A-1 Mesaverde

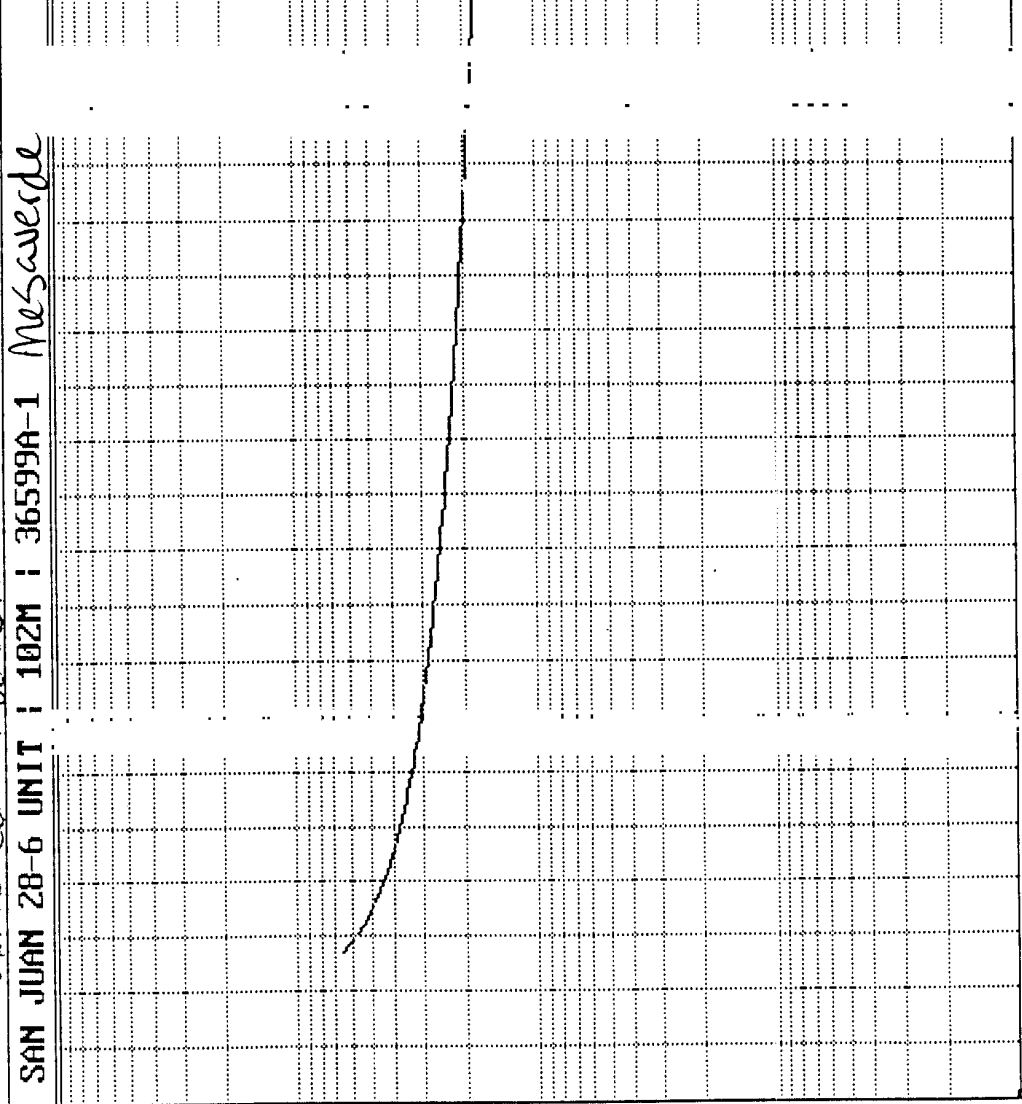
\* OIL  
\* WATER/GAS  
\* GAS  
\* WATER

100  
100  
100  
1000

10  
100  
100  
100

1  
10  
10  
10

0  
1  
1  
1

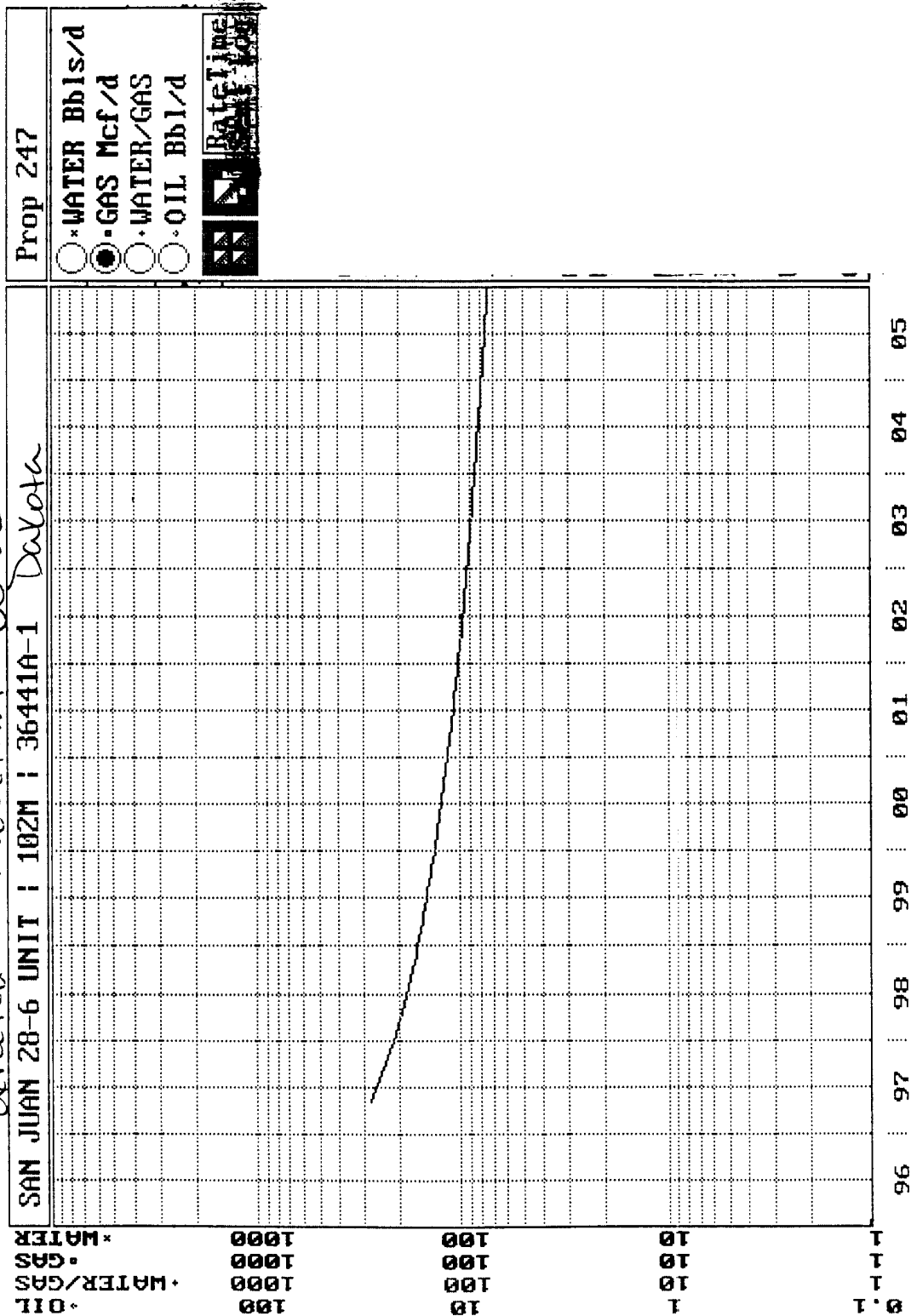


Prop 204

- \* WATER Bbls/d
- \* GAS Mcf/d
- \* WATER/GAS
- \* OIL Bbl/d

Rate Time  
36599A-1

# Expected Production Curve

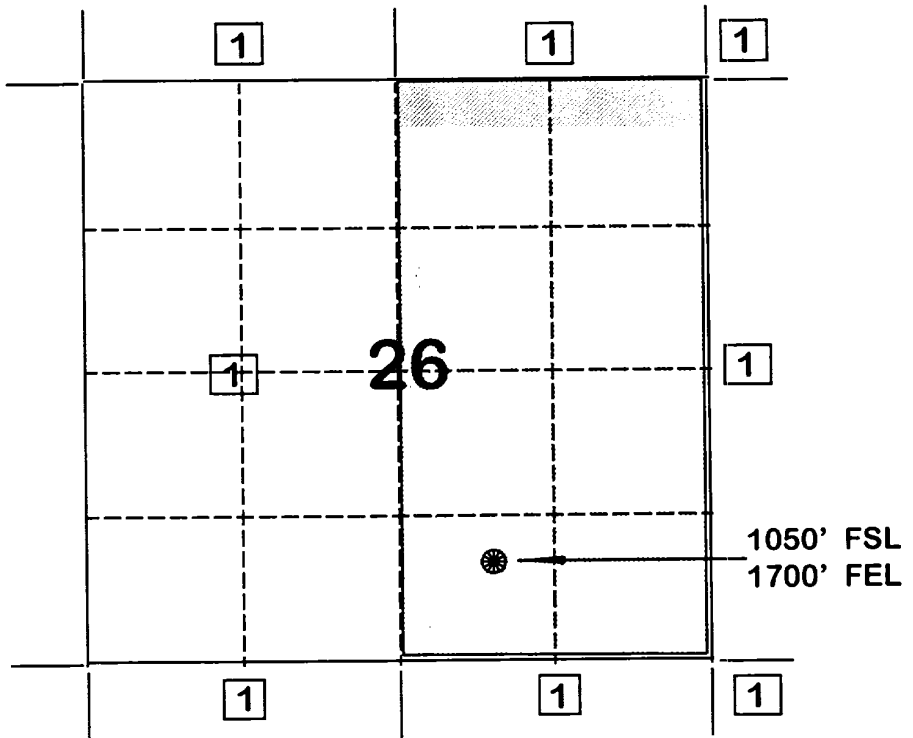


***BURLINGTON RESOURCES OIL AND GAS COMPANY***

**San Juan 28-6 Unit #102M  
OFFSET OPERATOR \ OWNER PLAT**

**Mesaverde/Dakota Formations Commingle Well**

**Township 28 North, Range 6 West**



**1) Burlington Resources Oil and Gas Company**

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.697
COND. OR MISC. (C/M)	C
%N2	0.24
%CO2	0.82
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	5691
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	543
BOTTOMHOLE PRESSURE (PSIA)	627.7

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.697
COND. OR MISC. (C/M)	C
%N2	0.24
%CO2	0.82
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	5691
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	973
BOTTOMHOLE PRESSURE (PSIA)	1137.8

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.601
COND. OR MISC. (C/M)	C
%N2	0.16
%CO2	1.16
%H2S	0
DIAMETER (IN)	2
DEPTH (FT)	7873
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1052
BOTTOMHOLE PRESSURE (PSIA)	1247.2

SAN JUAN 28-6 UNIT #102 DAKOTA - CURRENT



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

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.601</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.16</u>
%CO2	<u>1.16</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>2</u>
DEPTH (FT)	<u>7873</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>200</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>2764</u>
BOTTOMHOLE PRESSURE (PSIA)	<div>3300.5</div>

Page No.: 3

Print Time: Wed Mar 26 11:11:01 1997

Property ID: 10539

Property Name: SAN JUAN 28-6 UNIT | 45 | 51862A-1

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

SS 28-6 # 102m

Mesaverde Offset

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

04/02/57	0	973.0	← original
12/30/57	133000	829.0	
11/06/58	243000	729.0	
06/14/59	292000	722.0	
06/14/60	382000	676.0	
06/13/61	470000	648.0	
05/29/62	522000	697.0	
05/16/63	596000	700.0	
05/26/64	634000	717.0	
03/08/65	680000	692.0	
04/12/66	747000	650.0	
03/22/67	801000	631.0	
04/01/68	849000	627.0	
12/22/69	937028	574.0	
05/25/70	956360	572.0	
11/09/70	980199	579.0	
05/04/71	1004554	542.0	
05/22/72	1056719	528.0	
08/29/73	1129362	437.0	
07/31/74	1181058	438.0	
00/28/76	1253622	436.0	
10/28/76	1296326	436.0	
03/01/78	1369747	433.0	
03/01/79	1404219	433.0	
10/03/80	1481756	437.0	
05/18/82	1532149	472.0	
06/06/84	1574504	497.0	
10/20/86	1618158	471.0	
09/18/89	1677761	492.0	
07/30/91	1722293	530.0	
08/26/91	1722916	542.0	
05/03/93	1769726	493.0	
05/15/95	1807479	543.0	← current

Page No.: 1

Print Time: Fri Mar 21 15:07:12 1997

Property ID: 1822

Property Name: SAN JUAN 28-6 UNIT | 102 | 50753A-1

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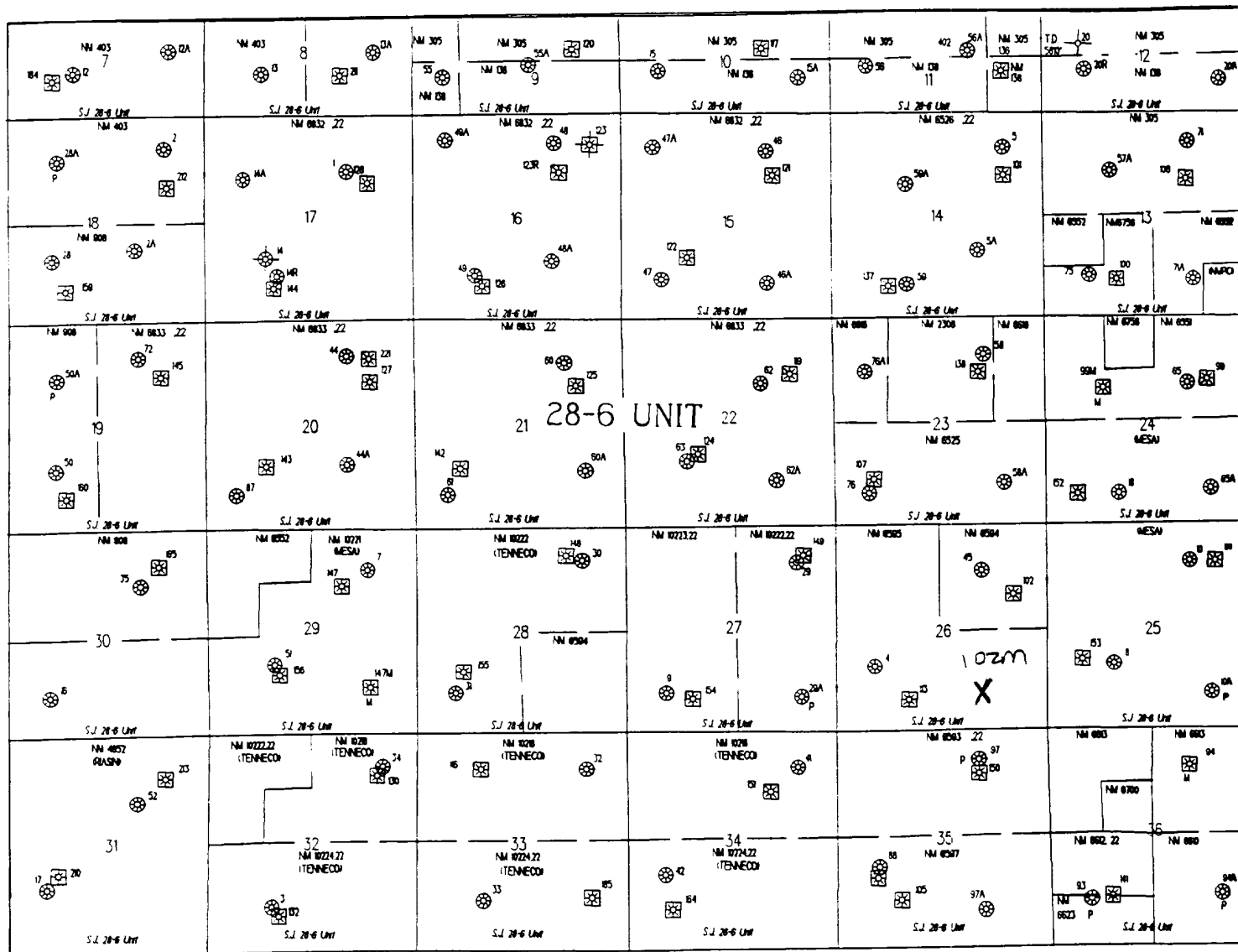
SJ 28-6 # 102 m

Dakota Offset

--DATE-- ---CUM GAS-- M SIWHP

Mcft Psi

10/13/63	0	2764.0	← original
11/04/63	0	2773.0	
10/01/64	146000	1668.0	
09/08/65	288000	1295.0	
04/12/66	396000	1242.0	
03/22/67	530000	1154.0	
04/01/68	693000	958.0	
11/09/70	1008475	816.0	
08/16/71	1076102	694.0	
05/22/72	1142927	487.0	
08/21/73	1233751	515.0	
06/24/75	1343580	566.0	
06/01/77	1420378	782.0	
06/07/79	1491180	832.0	
09/29/81	1554690	880.0	
09/22/83	1602701	905.0	
11/07/85	1654084	975.0	
10/15/88	1703145	1052.0	
05/25/90	1741676	1052.0	← 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.