

DATE IN 11/22/99	SUSPENSE 12/13/99	ENGINEER DC	LOGGED BY KV	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

# NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



2538

## ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

### Application Acronyms:

- ☐ [NSP-Non-Standard Proration Unit]    ☐ [NSL-Non-Standard Location]  
☐ [DD-Directional Drilling]    ☐ [SD-Simultaneous Dedication]  
☐ [DHC-Downhole Commingling]    ☐ [CTB-Lease Commingling]    ☐ [PLC-Pool/Lease Commingling]  
☐ [PC-Pool Commingling]    ☐ [OLS - Off-Lease Storage]    ☐ [OLM-Off-Lease Measurement]  
☐ [WFX-Waterflood Expansion]    ☐ [PMX-Pressure Maintenance Expansion]  
☐ [SWD-Salt Water Disposal]    ☐ [IPI-Injection Pressure Increase]  
☐ [EOR-Qualified Enhanced Oil Recovery Certification]    ☐ [PPR-Positive Production Response]

### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

☐ NSL    ☐ NSP    ☐ DD    ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

☒ DHC    ☐ CTB    ☐ PLC    ☐ PC    ☐ OLS    ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX    ☐ PMX    ☐ SWD    ☐ IPI    ☐ EOR    ☐ PPR

### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO

U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

### [3] INFORMATION / DATA SUBMITTED IS COMPLETE - Certification

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name

Signature

Title

Date

## 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 87505-6429Form C-107-A  
New 3-12-96

## APPROVAL PROCESS :

☒ Administrative ☐ Hearing

## EXISTING WELLBORE

☒ YES ☐ NO

## APPLICATION FOR DOWNHOLE COMMINGLING

Burlington Resources Oil &amp; Gas Company

PO Box 4289, Farmington, NM 87499

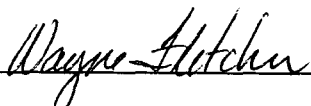
Operator	Address		
San Juan 28-6 Unit	170	B 05-27N-06W	Rio Arriba
Lease	Well No.	Unit Ltr. - Sec - Twp - Rge	County
Spacing Unit Lease Types: (check 1 or more)			
OGRID NO.	14538	Property Code	7462
API NO.	30-039-20482	Federal	x
State	(and/or) Fee		

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. 672 psi (see attachment)  (Original) b. 1282 psi (see attachment)	a.  b.	a. 843 psi (see attachment)  b. 3131 psi (see attachment)
6. Oil Gravity (API) or Gas BTU Content	BTU 1183		BTU 1164
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
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



TITLE: Production Engineer

DATE: 11-15-99

TYPE OR PRINT NAME: Wayne Fletcher

TELEPHONE NO.: (505) 326-9700

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, 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 30-039-20482	Pool Code 72319/71599	Pool Name Blanco Mesaverde/Basin Dakota
Property Code 7462	Property Name San Juan 28-6 Unit	Well Number 170
OGRID No. 14538	Operator Name Burlington Resources Oil & Gas Company	Elevation 6684' GR

<sup>10</sup> Surface Location

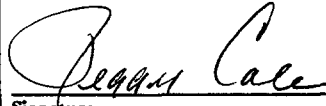
UL or lot no. G	Section 5	Township 27N	Range 6W	Lot Idn	Feet from the 1650	North/South line North	Feet from the 1460	East/West line East	County RA
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<sup>11</sup> Bottom Hole Location If Different From Surface

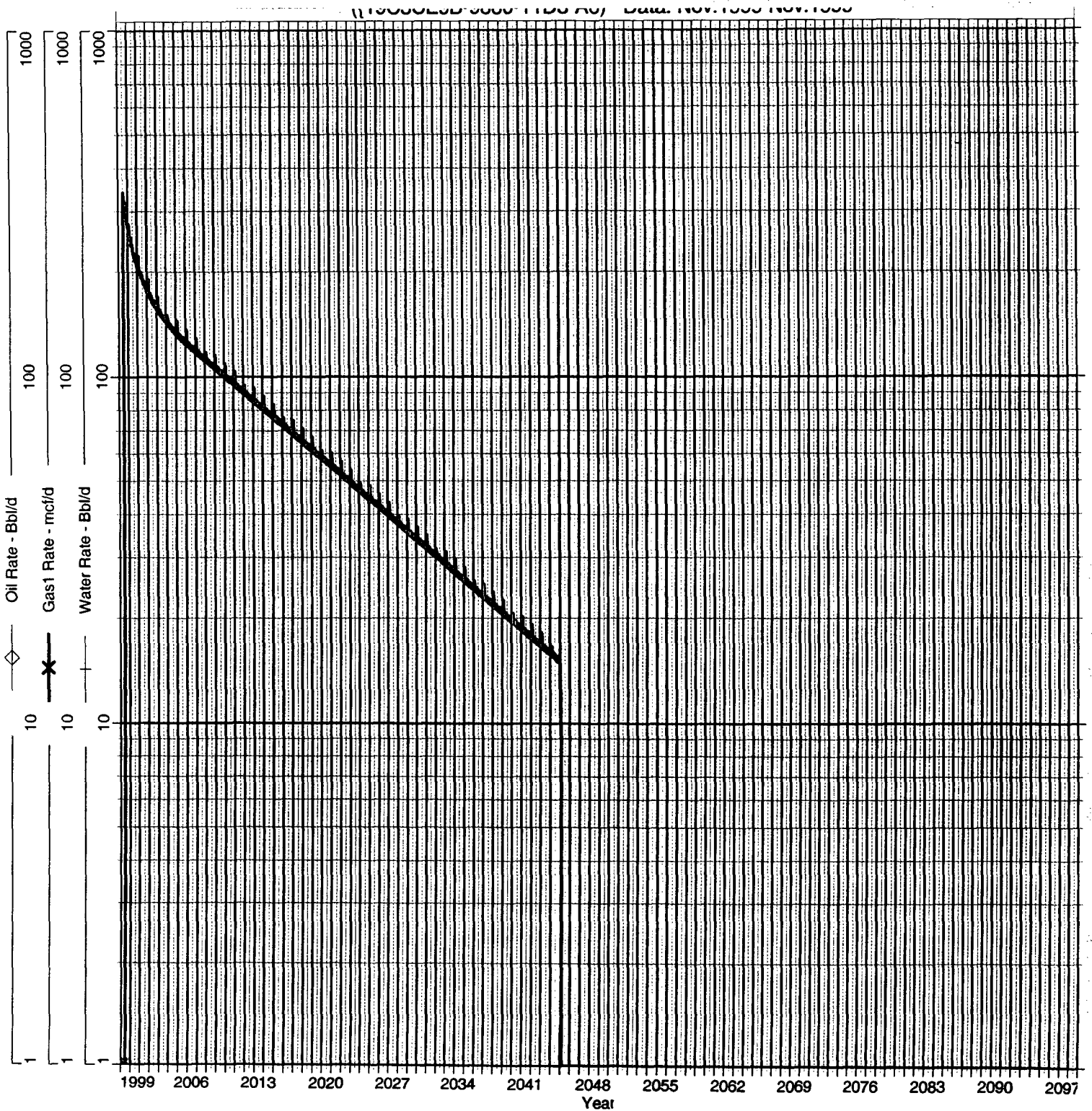
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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<sup>12</sup> Dedicated Acres E/320.87	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16  Original plat from David O. Villven 3-8-72	1650'	1460'	<sup>17</sup> OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>   Signature Peggy Cole Printed Name Regulatory Administrator Title 11-17-99 Date	
				<sup>18</sup> SURVEYOR CERTIFICATION <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>  Date of Survey Signature and Seal of Professional Surveyer:  Certificate Number

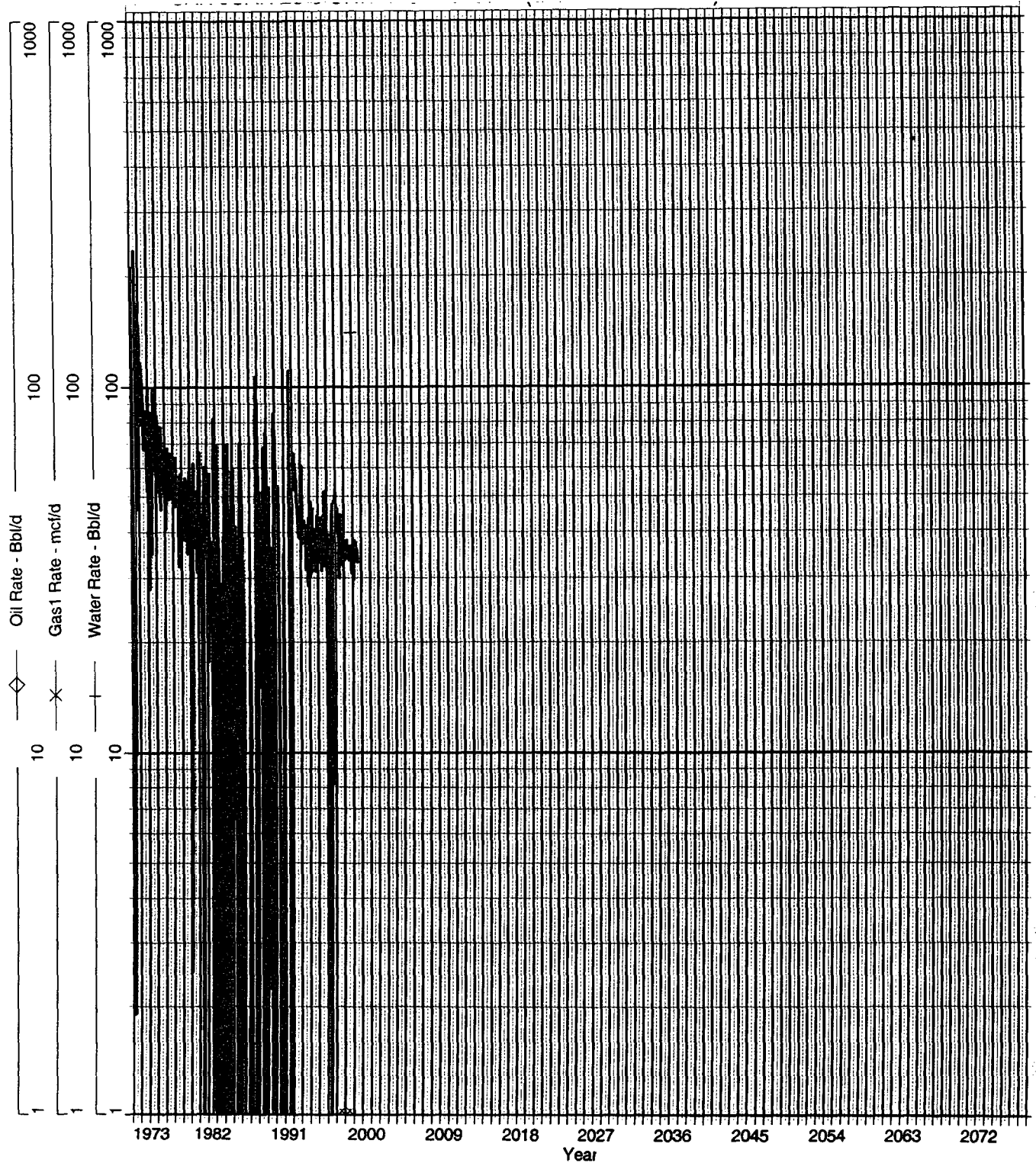
San Juan 28-6 Unit #170  
Expected Production  
Mesaverde Formation



San Juan 28-6 Unit #170

Expected Production

Dakota Formation



Page No.: 1  
 Print Time: Thu Nov 11 15:26:14 1999  
 Property ID: 1841  
 Property Name: SAN JUAN 28-6 UNIT | 38 | 49355A  
 Table Name: R:\RESERVES\GDPNOS\TEST.DBF

--DATE--	---CUM_GAS--	M SIWHP
	Mcf	Psi

10/15/55	0	1095.0
10/26/55	0	1094.0
08/24/56	84000	780.0
10/30/57	168000	690.0
11/06/58	219000	703.0
06/14/59	247000	690.0
06/14/60	290000	671.0
06/13/61	328000	707.0
05/29/62	360000	679.0
05/09/63	399000	661.0
05/26/64	436000	647.0
09/08/65	491000	492.0
04/12/66	514000	616.0
03/22/67	550000	612.0
04/01/68	589000	594.0
05/25/70	672803	544.0
05/04/71	713661	539.0
05/22/72	753894	494.0
07/31/74	829907	547.0
07/29/76	885266	583.0
06/05/78	939358	578.0
12/01/80	992866	599.0
04/07/86	1085838	581.0
09/18/89	1154197	582.0
07/30/91	1182969	570.0
08/26/91	1183431	582.0

San Juan 28-6 Unit #170

Mesaverde Offset

Page No.: 3

Print Time: Thu Nov 11 15:26:15 1999

Property ID: 1770

Property Name: SAN JUAN 28-6 UNIT | 170 | 44073A

Table Name: R:\RESERVES\GDPNOS\TEST.DBF

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

10/12/72	0	2547.0
02/26/73	29762	1787.0
07/31/74	194554	1120.0
06/24/75	267655	1117.0
07/29/76	360356	972.0
08/01/77	438786	820.0
05/08/79	548495	822.0
09/29/81	662191	881.0
11/04/81	673175	636.0
09/22/83	745082	1007.0
11/07/85	803825	998.0
04/22/90	954225	812.0
07/15/93	1084219	700.0

San Juan 28-6 Unit #170

Existing Dakota

**SJ 28-6 Unit #170**

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 0.679	GAS GRAVITY 0.671
COND. OR MISC. (C/M) C	COND. OR MISC. (C/M) C
%N2 0.25	%N2 0.18
%CO2 0.84	%CO2 1.14
%H2S 0	%H2S 0
DIAMETER (IN) 2	DIAMETER (IN) 1.5
DEPTH (FT) 5719	DEPTH (FT) 7839
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) 582	SURFACE PRESSURE (PSIA) 700
BOTTOMHOLE PRESSURE (PSIA) 672.4	BOTTOMHOLE PRESSURE (PSIA) 843.2
<u>MV-Original</u>	<u>DK-Original</u>
GAS GRAVITY 0.679	GAS GRAVITY 0.671
COND. OR MISC. (C/M) C	COND. OR MISC. (C/M) C
%N2 0.25	%N2 0.18
%CO2 0.84	%CO2 1.14
%H2S 0	%H2S 0
DIAMETER (IN) 2	DIAMETER (IN) 1.5
DEPTH (FT) 5719	DEPTH (FT) 7839
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) 1095	SURFACE PRESSURE (PSIA) 2547
BOTTOMHOLE PRESSURE (PSIA) 1281.6	BOTTOMHOLE PRESSURE (PSIA) 3131.2





**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.