

|                    |                      |                |             |             |
|--------------------|----------------------|----------------|-------------|-------------|
| DATE IN<br>11/6/97 | SUSPENSE<br>11/26/97 | ENGINEER<br>DC | LOGGED<br>W | TYPE<br>DHC |
|--------------------|----------------------|----------------|-------------|-------------|

ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

### ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

#### 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

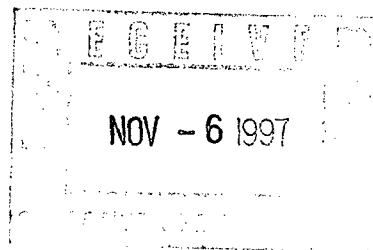
Check One Only for [B] and [C]

[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 - Statement of Understanding

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, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Peggy Bradfield

Print or Type Name

Signature

Regulatory/Compliance Administrator

Title

Date

10-27-97

# BURLINGTON RESOURCES

---

SAN JUAN DIVISION

October 24, 1997

SENT FEDERAL EXPRESS

Mr. William LeMay  
New Mexico Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Re: San Juan 27-5 Unit #57  
1450'FNL, 2510'FWL Section 13, T-27-N, R-5-W, Rio Arriba County, NM  
API #30-039-07082

Dear Mr. LeMay:

This is a request for administrative approval for downhole commingling the Blanco Mesa Verde and Basin Dakota pools in the subject well. This well was originally drilled as a Dakota; it is intended to add the Mesa Verde and commingle.

To comply with the New Mexico Oil Conservation Division rules, Burlington Resources Oil & Gas is submitting the following for your approval of this commingling:

1. Form C107A - Application for Downhole Commingling;
2. C-102 plat for each zone showing its spacing unit and acreage dedication;
3. Production curve for Dakota for at least one year, and anticipated production curve for Mesa Verde;
4. Notification list of offset operators - Burlington is operator of San Juan 27-5 Unit;
5. Shut in wellhead pressure and calculated down hole pressure;
6. Nine-section plats for the Mesa Verde and Dakota

Notification of Mesa Verde and Dakota interest owners is covered under Reference Order #R-10694 issued November 12, 1996 attached.

We will consult with the Supervisor of the Aztec District Office of the New Mexico Oil Conservation Division to establish an allocation formula.

Please let me know if you require additional data.

Sincerely,



Peggy Bradfield  
Regulatory/Compliance Administrator

encs.

xc: Bureau of Land Management  
NMOCD - Aztec

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

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

☐ YES ☐ NO

Burlington Resources Oil & Gas Company

PO Box 4289, Farmington, NM 87499

Operator Address  
SAN JUAN 27-5 UNIT 57 F-13-27N-05W Rio Arriba  
Lease Well No. Unit Ltr. - Sec - Twp - Rge Spacing Unit Lease Types: (check 1 or more)  
OGRID NO. 14538 Property Code 7455 API NO. 30-039-07082 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)  | 5369-6122'  |                   | 7873-8061'  |
| 3. Type of production (Oil or Gas)   | gas   |                   | gas   |
| 4. Method of Production (Flowing or Artificial Lift)   | flowing   |                   | flowing   |
| 5. Bottomhole Pressure<br>Oil Zones - Artificial Lift:<br>Gas & Oil - Flowing:<br>All Gas Zones:<br>Estimated or Measured Original   | (Current)<br>a. 698 psi                           | a.                | a. 1180 psi                                       |
|  | (Original)<br>b. 1338 psi                         | b.                | b. 2846 psi                                       |
| 6. Oil Gravity (°API) or Gas BTU Content   | BTU 1145  |                   | BTU 1104  |
| 7. Producing or Shut-In?   | not yet producing                                 |                   | producing   |
| Production Marginal? (yes or no)   | yes   |                   | yes   |
| * If Shut-In and oil/gas/water rates of last production<br><br>Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data<br><br>* If Producing, give data and oil/gas/water of recent test (within 60 days) | Date: n/a<br>Rates:                               | Date:<br>Rates:   | Date: n/a<br>Rates:                               |
|  | Date: n/a<br>Rates:                               | Date:<br>Rates:   | Date: 8/97<br>Rates: 150 MCFD/0.5 BOPD            |
| 8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)  | Oil: % Gas: %<br>will be supplied upon completion | Oil: % Gas: %     | Oil: % Gas: %<br>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. NMOC Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). R-10694
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 J. L. Dobson TITLE Production Engineer DATE 10/24/97

TYPE OR PRINT NAME Jennifer L. Dobson TELEPHONE NO. (505) 599-4026

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer 00, 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  
Revised February 21,  
Instructions on  
Submit to Appropriate District Of  
State Lease - 4 Co.  
Fee Lease - 3 Co.

☐ AMENDED REPC

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                             |  |                           |   |
|-----------------------------|--|---------------------------|---|
| *API Number<br>30-039-07082 |  | *Pool Code<br>72319/71599 | *Pool Name<br>Blanco Mesaverde/Basin Dakota |
| *Property Code<br>7454      | *Property Name<br>SAN JUAN 27-5 UNIT                     |                           | *Well Number<br>57                          |
| *OGRID No.<br>14538         | *Operator Name<br>BURLINGTON RESOURCES OIL & GAS COMPANY |                           | *Elevation<br>6838                          |

<sup>10</sup> Surface Location

|                    |               |                 |             |         |                       |                           |                       |                        |                    |
|--------------------|---------------|-----------------|-------------|---------|-----------------------|---------------------------|-----------------------|------------------------|--------------------|
| UL or lot no.<br>F | Section<br>13 | Township<br>27N | Range<br>5W | Lot Idn | Feet from the<br>1450 | North/South line<br>North | Feet from the<br>2510 | East/West line<br>West | County<br>RIO ARRI |
|--------------------|---------------|-----------------|-------------|---------|-----------------------|---------------------------|-----------------------|------------------------|--------------------|

<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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|

|   |                               |                                  |                         |
|---|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres<br>MV-W/320<br>DK-N/320 | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |
|---|-------------------------------|----------------------------------|-------------------------|

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

|       |  |       |  |  |
|-------|--|-------|--|--|
|       |  | 1450' | *Not re-surveyed:<br>Prepared from plat<br>By: Ernest Echohawk<br>Dated: 6 April, 1965 |  |
|       |  |       |  |  |
| 2510' |  | 13    |  |  |
|       |  |       |  |  |
|       |  |       |  |  |
|       |  |       |  |  |
|       |  |       |  |  |
|       |  |       |  |  |

<sup>17</sup> OPERATOR CERTIFICATION

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

Signature  
Peggy Bradfield  
Printed Name  
Regulatory Administrator  
Title

Date

<sup>18</sup> SURVEYOR CERTIFICATION

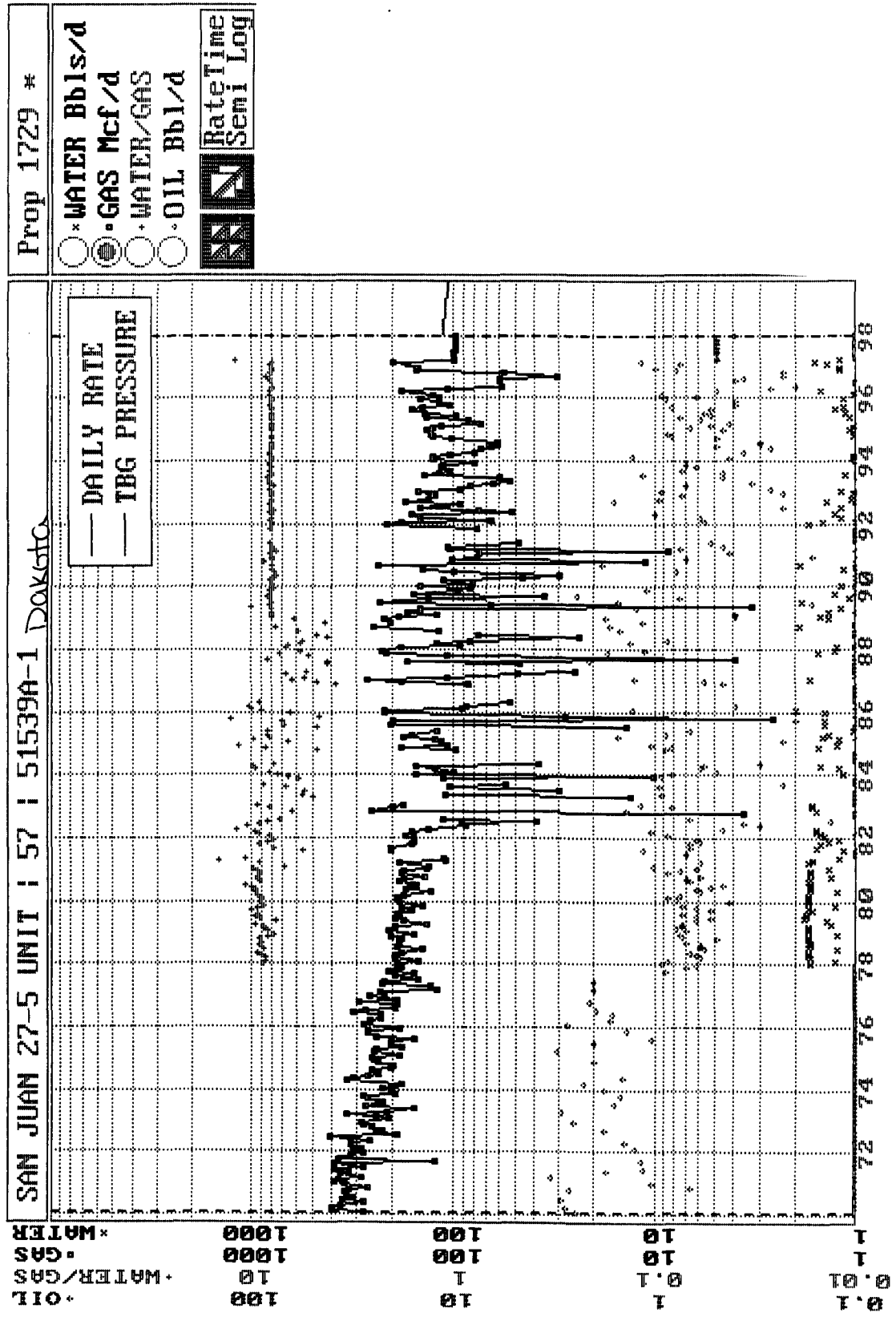
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made or under my supervision, and that the same is true and correct to the best of my belief.

OCTOBER 29, 1997

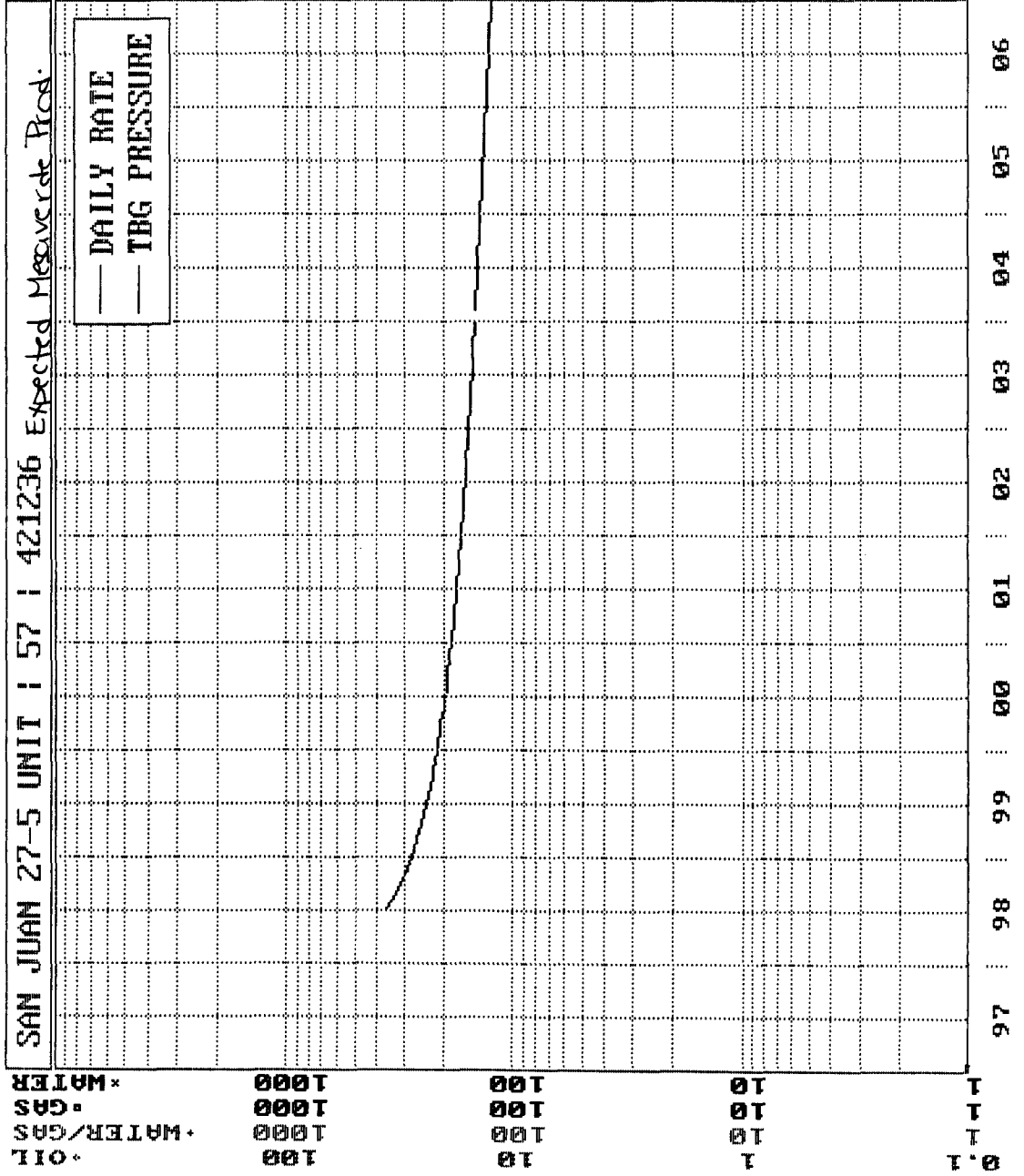
Date of Survey

Signature and Seal of Professional Surveyor

NEALE C. EDWARDS  
NEW MEXICO  
6857  
6857  
Certificate Number



|  |  |  |
|--|--|--|
| SAN JUAN 27-5 UNIT : 57 : 421236 Expected Mesa Verde Prod.   |  | Prop 19  |
| <input type="radio"/> OIL<br><input type="radio"/> WATER/GAS<br><input type="radio"/> GAS<br><input type="radio"/> WATER | <input type="radio"/> *WATER Bbls/d<br><input checked="" type="radio"/> *GAS Mcf/d<br><input type="radio"/> *WATER/GAS<br><input type="radio"/> *OIL Bbl/d | <input type="checkbox"/> Rate<br><input checked="" type="checkbox"/> Time<br><input type="checkbox"/> Semi<br><input type="checkbox"/> Log |

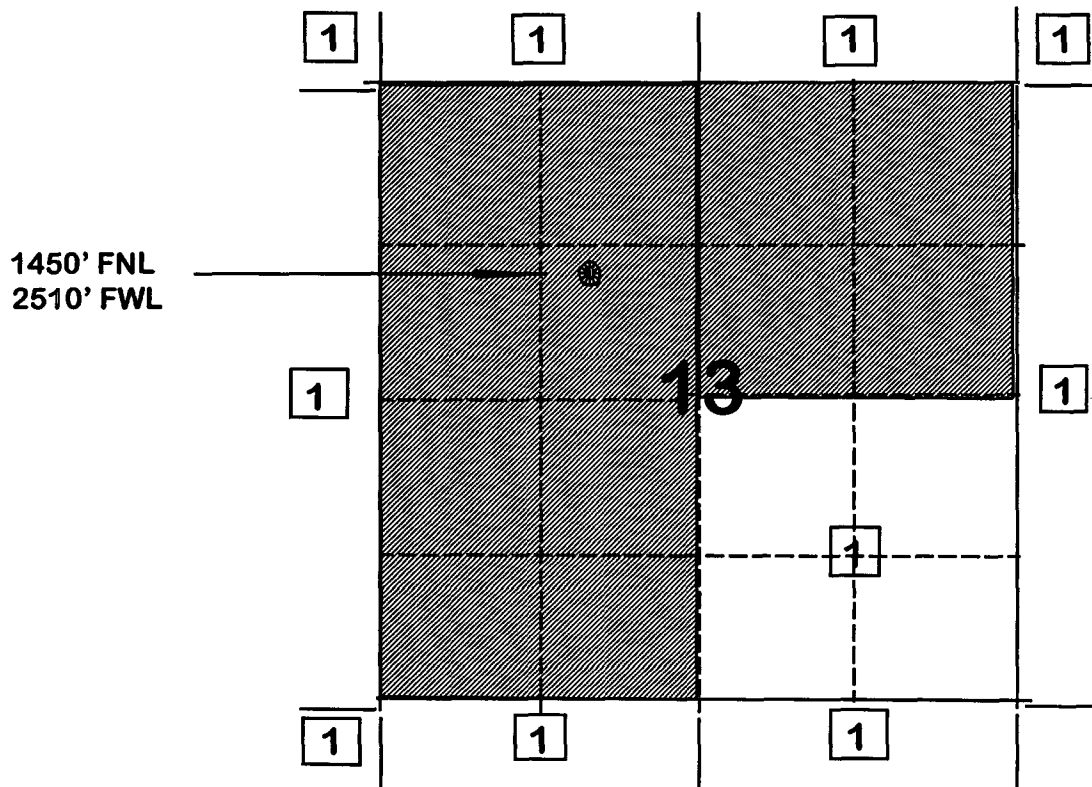


***BURLINGTON RESOURCES OIL AND GAS COMPANY***

**San Juan 27-5 Unit #57  
OFFSET OPERATOR \ OWNER PLAT**

**Mesaverde (W/2) / Dakota (N/2) Formations Commingle Well**

**Township 27 North, Range 5 West**



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

Page No.: 1  
Print Time: Fri Oct 10 13:09:04 1997  
Property ID: 1729  
Property Name: SAN JUAN 27-5 UNIT | 57 | 51539A-1  
Table Name: K:\ARIES\RR98PDP\TEST.DBF

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

|          |         |        |            |
|----------|---------|--------|------------|
| 07/12/65 | 0       | 2325.0 | → original |
| 07/19/65 | 0       | 2409.0 |            |
| 10/28/66 | 170000  | 1684.0 |            |
| 08/04/67 | 304000  | 1771.0 |            |
| 09/23/68 | 491000  | 1384.0 |            |
| 06/30/69 | 609000  | 1167.0 |            |
| 10/07/70 | 784227  | 1119.0 |            |
| 07/22/71 | 876658  | 997.0  |            |
| 06/06/72 | 980503  | 1030.0 |            |
| 07/19/73 | 1076625 | 1031.0 |            |
| 05/22/75 | 1234828 | 972.0  |            |
| 07/06/77 | 1412044 | 884.0  |            |
| 05/01/79 | 1534716 | 890.0  |            |
| 05/21/81 | 1656241 | 879.0  |            |
| 09/13/83 | 1741762 | 1042.0 |            |
| 05/20/85 | 1796103 | 1005.0 |            |
| 07/12/88 | 1893298 | 1357.0 |            |
| 06/08/90 | 1977113 | 1051.0 |            |
| 08/31/92 | 2042387 | 977.0  | → current  |

Page No.: 1  
Print Time: Fri Oct 10 13:08:00 1997  
Property ID: 11439  
Property Name: SAN JUAN 27-5 UNIT | 91 | 50668A-1  
Table Name: K:\ARIES\RR98PDP\TEST.DBF

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

|          |        |        |          |
|----------|--------|--------|----------|
| 10/30/62 | 0      | 1143.0 | original |
| 10/07/70 | 132197 | 487.0  |          |
| 07/22/71 | 141696 | 496.0  |          |
| 06/06/72 | 152383 | 418.0  |          |
| 12/06/83 | 255853 | 609.0  |          |
| 04/18/86 | 272283 | 602.0  |          |
| 08/30/91 | 298546 | 604.0  | current  |

**San Juan 27-5 #57**  
**Bottom Hole Pressures**  
**Flowing and Static BHP**  
**Cullender and Smith Method**  
Version 1.0 3/13/94

| Mesa Verde  |        | Dakota                         |        |
|---|--------|--------------------------------|--------|
| <u>MV - Current</u>   |        | <u>DK-Current</u>              |        |
| GAS GRAVITY   | 0.684  | GAS GRAVITY                    | 0.652  |
| COND. OR MISC. (C/M)  | C      | COND. OR MISC. (C/M)           | C      |
| %N2   | 0.19   | %N2                            | 0.55   |
| %CO2  | 1.04   | %CO2                           | 1.27   |
| %H2S  | 0      | %H2S                           | 0      |
| DIAMETER (IN)   | 1.995  | DIAMETER (IN)                  | 1.995  |
| DEPTH (FT)  | 5746   | DEPTH (FT)                     | 7967   |
| SURFACE TEMPERATURE (DEG F)   | 60     | SURFACE TEMPERATURE (DEG F)    | 60     |
| BOTTOMHOLE TEMPERATURE (DEG F)  | 150    | BOTTOMHOLE TEMPERATURE (DEG F) | 200    |
| FLOWRATE (MCFPD)  | 0      | FLOWRATE (MCFPD)               | 0      |
| SURFACE PRESSURE (PSIA)   | 604    | SURFACE PRESSURE (PSIA)        | 977    |
| BOTTOMHOLE PRESSURE (PSIA)  | 698.0  | BOTTOMHOLE PRESSURE (PSIA)     | 1180.0 |
| The Mesa Verde Pressures are from the San Juan 27-5 #91 which is an offset MV producer. |        |                                |        |
| <u>MV - Original</u>  |        | <u>DK-Original</u>             |        |
| GAS GRAVITY   | 0.684  | GAS GRAVITY                    | 0.652  |
| COND. OR MISC. (C/M)  | C      | COND. OR MISC. (C/M)           | C      |
| %N2   | 0.19   | %N2                            | 0.55   |
| %CO2  | 1.04   | %CO2                           | 1.27   |
| %H2S  | 0      | %H2S                           | 0      |
| DIAMETER (IN)   | 1.995  | DIAMETER (IN)                  | 1.995  |
| DEPTH (FT)  | 5746   | DEPTH (FT)                     | 7967   |
| SURFACE TEMPERATURE (DEG F)   | 60     | SURFACE TEMPERATURE (DEG F)    | 60     |
| BOTTOMHOLE TEMPERATURE (DEG F)  | 150    | BOTTOMHOLE TEMPERATURE (DEG F) | 200    |
| FLOWRATE (MCFPD)  | 0      | FLOWRATE (MCFPD)               | 0      |
| SURFACE PRESSURE (PSIA)   | 1143   | SURFACE PRESSURE (PSIA)        | 2325   |
| BOTTOMHOLE PRESSURE (PSIA)  | 1338.1 | BOTTOMHOLE PRESSURE (PSIA)     | 2846.0 |
| The Mesa Verde Pressures are from the San Juan 27-5 #91 which is an offset MV producer. |        |                                |        |

FARMINGTON

1997 MONTHLY PRODUCTION FOR 51539A

PHS030M1

SAN JUAN 27-5 UNIT

57

BASIN DAKOTA (PRORATED GAS) FIELD

DAKOTA ZONE

| DAYS ===== OIL ===== |   |   |    |    | ===== GAS ===== |      |    |      |    |      |        |       |      |   |
|----------------------|---|---|----|----|-----------------|------|----|------|----|------|--------|-------|------|---|
| MO                   | T | S | ON | PC | PROD            | GRV  | PC | PROD | ON | BTU  | PRESS  | WATER | PROD | C |
| 1                    | 2 | F | 31 | 02 | 23              |      | 01 | 5214 | 31 | 1115 | 15.025 |       | 42   |   |
| 2                    | 2 | F | 28 | 02 | 36              | 59.4 | 01 | 6181 | 28 | 1115 | 15.025 |       | 49   |   |
| 3                    | 2 | F | 31 | 02 | 15              |      | 01 | 4680 | 31 | 1094 | 15.025 |       | 37   |   |
| 4                    | 2 | F | 30 | 02 | 11              |      | 01 | 2992 | 30 | 1104 | 15.025 |       | 24   |   |
| 5                    | 2 | F | 31 | 02 | 28              |      | 01 | 5190 | 31 | 1104 | 15.025 |       | 41   |   |
| 6                    | 2 | F | 30 | 02 | 13              |      | 01 | 4753 | 30 | 1104 | 15.025 |       | 38   |   |
| 7                    | 2 | F | 31 | 02 | 20              | 58.4 | 01 | 5023 | 31 | 1104 | 15.025 |       | 40   |   |
| 8                    | 2 | F | 31 | 02 | 16              |      | 01 | 4638 | 31 | 1104 | 15.025 |       | 37   |   |
| 9                    |   |   |    |    |                 |      |    |      |    |      |        |       |      |   |
| 10                   |   |   |    |    |                 |      |    |      |    |      |        |       |      |   |
| 11                   |   |   |    |    |                 |      |    |      |    |      |        |       |      |   |
| 12                   |   |   |    |    |                 |      |    |      |    |      |        |       |      |   |

PF6 - RETURNS TO ANNUAL DISPLAY  
PF10 - HELP INFORMATION

00/00/00 00:00:00:0

PF3 - TRANSFER TO UPDATE  
PF9 - DISPLAY MONTHLY INJECTION  
PRS 10/03/97

DATE: September 22, 1997  
 NAME: SAN JUAN 27-5 UNIT 57  
 FORM: MESAVERDE  
 LOCATION  
 UNIT: F  
 SEC: 13  
 TWN: 27N  
 RNG: 5W

LEGEND  
 WELL STATUS  
 COMPLETION DATE  
 WELL NAME  
 MCF/D-CUM(MMF)  
 BOP/D-CUM(MBO)

|  |  |   |  |
|--|--|---|--|
| <p>10/84<br/>San Juan 27-5 Unit 99E<br/>92/709(97)<br/>0/3</p> <p>[11]</p> <p>2/56<br/>San Juan 27-5 Unit 14<br/>49/1225(97)<br/>0/0</p> <p>5/97<br/>San Juan 27-5 Unit 105M<br/>350/31(97)<br/>0/0</p> <p>10/62<br/>San Juan 27-5 Unit 88<br/>89/1244(97)<br/>0/4</p> <p>11/77<br/>San Juan 27-4 Unit 123<br/>168/828(97)<br/>1/3</p> | <p>10/62<br/>San Juan 27-5 Unit 88<br/>89/1244(97)<br/>0/4</p> <p>2/87<br/>San Juan 27-5 Unit 102M<br/>134/376(97)<br/>0/1</p> <p>7/61<br/>San Juan 274 Unit 31<br/>113/1255(97)<br/>0/4</p> <p>11/77<br/>San Juan 27-4 Unit 123<br/>168/828(97)<br/>1/3</p> | <p>10/62<br/>San Juan 27-5 Unit 91<br/>156/361(97)<br/>0/0</p> <p>10/62<br/>San Juan 27-4 Unit 121<br/>190/1662(97)<br/>0/6</p> <p>11/57<br/>San Juan 27-4 Unit 14X<br/>33/880(97)<br/>0/1</p> <p>12/74<br/>San Juan 27-4 Unit 121<br/>190/1662(97)<br/>0/6</p> | <p>10/62<br/>San Juan 27-5 Unit 88<br/>89/1244(97)<br/>0/4</p> <p>2/87<br/>San Juan 27-5 Unit 102M<br/>134/376(97)<br/>0/1</p> <p>7/61<br/>San Juan 274 Unit 31<br/>113/1255(97)<br/>0/4</p> <p>11/77<br/>San Juan 27-4 Unit 123<br/>168/828(97)<br/>1/3</p> |
| <p>6/97<br/>San Juan 27-5 Unit 98<br/>315/19(97)<br/>0/0</p> <p>12/81<br/>San Juan 27-5 Unit 98E<br/>148/673(97)<br/>0/3</p> <p>5/54<br/>San Juan 27-5 Unit 6<br/>446/1063(97)<br/>1/1</p> <p>6/97<br/>San Juan 27-5 Unit 103E<br/>247/7(97)<br/>0/0</p> <p>7/61<br/>San Juan 27-5 Unit 10<br/>40/666(97)<br/>0/0</p>                  | <p>5/58<br/>San Juan 27-5 Unit 29<br/>9/361(97)<br/>0/0</p> <p>5/58<br/>San Juan 27-5 Unit 31<br/>70/1376(97)<br/>0/1</p> <p>11/59<br/>San Juan 27-4 Unit 23<br/>82/413(97)<br/>0/0</p> <p>10/76<br/>San Juan 27-4 Unit 105<br/>120/451(97)<br/>0/1</p>      | <p>10/62<br/>San Juan 27-5 Unit 91<br/>156/361(97)<br/>0/0</p> <p>10/62<br/>San Juan 27-4 Unit 121<br/>190/1662(97)<br/>0/6</p> <p>11/57<br/>San Juan 27-4 Unit 14X<br/>33/880(97)<br/>0/1</p> <p>12/74<br/>San Juan 27-4 Unit 121<br/>190/1662(97)<br/>0/6</p> | <p>10/62<br/>San Juan 27-5 Unit 88<br/>89/1244(97)<br/>0/4</p> <p>2/87<br/>San Juan 27-5 Unit 102M<br/>134/376(97)<br/>0/1</p> <p>7/61<br/>San Juan 274 Unit 31<br/>113/1255(97)<br/>0/4</p> <p>11/77<br/>San Juan 27-4 Unit 123<br/>168/828(97)<br/>1/3</p> |
| <p>6/97<br/>San Juan 27-5 Unit 98<br/>315/19(97)<br/>0/0</p> <p>12/81<br/>San Juan 27-5 Unit 98E<br/>148/673(97)<br/>0/3</p> <p>5/54<br/>San Juan 27-5 Unit 6<br/>446/1063(97)<br/>1/1</p> <p>6/97<br/>San Juan 27-5 Unit 103E<br/>247/7(97)<br/>0/0</p> <p>7/61<br/>San Juan 27-5 Unit 10<br/>40/666(97)<br/>0/0</p>                  | <p>5/58<br/>San Juan 27-5 Unit 29<br/>9/361(97)<br/>0/0</p> <p>5/58<br/>San Juan 27-5 Unit 31<br/>70/1376(97)<br/>0/1</p> <p>11/59<br/>San Juan 27-4 Unit 23<br/>82/413(97)<br/>0/0</p> <p>10/76<br/>San Juan 27-4 Unit 105<br/>120/451(97)<br/>0/1</p>      | <p>10/62<br/>San Juan 27-5 Unit 91<br/>156/361(97)<br/>0/0</p> <p>10/62<br/>San Juan 27-4 Unit 121<br/>190/1662(97)<br/>0/6</p> <p>11/57<br/>San Juan 27-4 Unit 14X<br/>33/880(97)<br/>0/1</p> <p>12/74<br/>San Juan 27-4 Unit 121<br/>190/1662(97)<br/>0/6</p> | <p>10/62<br/>San Juan 27-5 Unit 88<br/>89/1244(97)<br/>0/4</p> <p>2/87<br/>San Juan 27-5 Unit 102M<br/>134/376(97)<br/>0/1</p> <p>7/61<br/>San Juan 274 Unit 31<br/>113/1255(97)<br/>0/4</p> <p>11/77<br/>San Juan 27-4 Unit 123<br/>168/828(97)<br/>1/3</p> |

R-4-W

R-5-W

DATE: October 27, 1997  
 NAME: San Juan 27-5 Unit 57  
 FMT: Dakota  
 LOCATION  
 UNIT: F  
 SEC: 13  
 TWN: 27N  
 RNG: 05W

LEGEND  
 FIRST DELIVERY DATA  
 \*  
 WELL NAME  
 MCFD-CUM(MMCF)  
 BOPD-CUM(MBO)

|   |  |   |
|---|--|---|
| <p>7/83 *<br/>San Juan 27-5 Unit 99E<br/>170/641 (97)<br/>1/5</p> <p>[11]</p> <p>6/67 *<br/>San Juan 27-5 Unit 105<br/>146/1875 (97)<br/>1/11</p> <p>10/81 *<br/>San Juan 27-5 Unit 105M<br/>273/954 (97)<br/>1/6</p> <p>11/65 *<br/>San Juan 27-5 Unit 99<br/>192/2745 (97)<br/>0/9</p>  | <p>8/67 *<br/>San Juan 27-5 Unit 104<br/>178/2325 (97)<br/>0/4</p> <p>[12]</p> <p>8/67 *<br/>San Juan 27-5 Unit 102<br/>375/3363 (97)<br/>0/6</p> <p>5/86 *<br/>San Juan 27-5 Unit 102M<br/>133/519 (97)<br/>0/2</p> | <p>9/55 *<br/>San Juan 27-4 Unit 5<br/>6/1733 (97)<br/>0/1</p> <p>9/68 *<br/>San Juan 27-4 Unit 41<br/>268/3487 (97)<br/>1/7</p> <p>[7]</p>   |
| <p>6/65 *<br/>San Juan 27-5 Unit 98<br/>180/1582 (97)<br/>1/9</p> <p>1/82 *<br/>San Juan 27-5 Unit 98E<br/>218/829 (97)<br/>1/6</p> <p>7/67 *<br/>San Juan 27-5 Unit 103<br/>116/1400 (97)<br/>0/8</p> <p>[14]</p> <p>3/86 *<br/>San Juan 27-5 Unit 103E<br/>273/1086 (97)<br/>1/3</p> <p>7/65 *<br/>San Juan 27-5 Unit 57<br/>159/2240 (97)<br/>1/7</p> <p>INA<br/>6/67 *<br/>San Juan 27-5 Unit 107<br/>3732 (82)<br/>0/3</p> <p>8/68 *<br/>San Juan 27-4 Unit 44<br/>351/5288 (97)<br/>1/12</p> <p>[18]</p> <p>11/57 *<br/>San Juan 27-4 Unit 14X<br/>98/1563 (97)<br/>0/3</p> | <p>7/69 *<br/>San Juan 27-5 Unit 116<br/>81/886 (97)<br/>1/7</p> <p>5/70 *<br/>San Juan 27-5 Unit 119<br/>129/1190 (97)<br/>1/5</p> <p>[24]</p>  | <p>8/68 *<br/>San Juan 27-4 Unit 45<br/>93/947 (97)<br/>0/6</p> <p>3/86 *<br/>San Juan 27-4 Unit 50E<br/>118/566 (97)<br/>0/3</p> <p>12/68 *<br/>San Juan 27-4 Unit 50<br/>168/1291 (97)<br/>1/13</p> <p>[19]</p> |
| <p>6/70 *<br/>San Juan 27-5 Unit 120<br/>141/1812 (97)<br/>0/11</p> <p>[23]</p> <p>7/69 *<br/>San Juan 27-5 Unit 115<br/>174/2062 (97)<br/>1/11</p>   |  |   |

R-04-W

R-05-W

**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. 11626  
ORDER NO. R-10694**

**APPLICATION OF BURLINGTON RESOURCES  
OIL & GAS COMPANY FOR THE ESTABLISHMENT  
OF A DOWNHOLE COMMINGLING "REFERENCE  
CASE" FOR ITS SAN JUAN 27-5 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 27-5 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 27-5 Unit which encompasses some 23,043 acres in Township 27 North, Range 5 West, NMPM, San Juan County, New Mexico.

(5) Within the San Juan 27-5 Unit, the applicant currently operates one hundred and one (101) Basin-Dakota Gas Pool wells, one hundred and five (105) Blanco-Mesaverde Gas Pool wells, eighty-seven (87) South Blanco-Pictured Cliffs and Tapacito-Pictured Cliffs Gas Pool wells, and four (4) 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 27-5 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 27-5 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 27-5 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 27-5 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 27-5 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 583 MMCFG and 426 MMCFG, respectively;
- c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 393 MCFGD and 63 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 27-5 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 27-5 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 3.141 psi and 1.118 psi, respectively; and.
- b) the average current shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations are approximately 1.032 psi and 441 psi, respectively.

(10) There is sufficient pressure data available within the San Juan 27-5 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 27-5 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 allocation methods proposed by the applicant are routinely utilized by the 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 27-5 Unit the applicant presents evidence and testimony which indicates that:

- a) the interest ownership between two zones within a given wellbore in the San Juan 27-5 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 27-5 Unit every time a Form C-107-A is submitted to the Division. There is a considerable number of such interest owners within the unit;

- c) providing notice to each interest owner within the San Juan 27-5 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 27-5 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 27-5 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 27-5 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 commingling approvals within the San Juan 27-5 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 27-5 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 27-5 Unit Area, the applicant shall not be required to submit supporting data to justify the classification of the Picured Cliffs and Dakota formations as "marginal", supporting data to verify the Picured 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 27-5 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 27-5 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