| DATE IN 7 | 1/14 | 198 | SUSPENSE 8 | //3 | / | 98 | ENGINEER | DC | LOGGED BY | W | TYPE | DHC |
|-----------|------|-----|------------|-----|---|----|----------|----|-----------|---|------|-----|
|           |      |     |            | ,   | _ |    |          |    |           |   |      |     |

#### NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -2040 South Pacheco, Santa Fe, NM 87505



|       | Al                | DMINISTRATIVE APPLICATION COVERSHEET                                                                                                                                       |
|-------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| THI   | S COVERSHEET IS M | IANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE                   |
| Appli | looq-Oqj<br>Vj    |                                                                                                                                                                            |
| [1]   | [A]               | PPLICATION - Check Those Which Apply for [A]  Location - Spacing Unit - Directional Drilling  NSL NSP DD DSD  JUL 14 1998                                                  |
|       | Check<br>[B]      | Commingling - Storage - Measurement  One Only for [B] or [C]  Commingling - Storage - Measurement  One Only for [B] or [C]  CONSERVATION DIVISION  One Only for [B] or [C] |
|       | [C]               | Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  WFX PMX SWD IPI EOR PPR                                                                                  |
| [2]   | NOTIFICAT         | TON 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 numbe          | rs. pool codes. etc.), pertinen |
|--------------------|---------------------------------------------|---------------------------------------|---------------------------------|
| information and a  | ny required notification <u>is cause to</u> | have the application package          | returned with no action taken   |
| No                 | te: Statement must be completed by an i     | ndividual with managerial and/or supe | ervisory capacity.              |
|                    | Sag Sag                                     | fued                                  |                                 |
| Print or Type Name | Signature                                   | Title                                 | Date                            |
|                    |                                             |                                       |                                 |

DISTRICT !

**DISTRICT II** 

811 South First St., Artesia, NM 88210-2835

**DISTRICT III** 

1000 Rio Brazos Rd, Aztec, NM 87410-1693

OGRID NO. <u>14538</u> Property Code \_

The following facts are submitted in support of downhole commingling:

2. Top and Bottom of Pay Section (Perforations)

1. Pool Name and Pool Code

3. Type of production

TYPE OR PRINT NAME\_

L. Tom Loveland

State of New Mexico
Energy, Minerals and Natural Resources Department

#### **OIL CONSERVATION DIVISION**

APPLICATION FOR DOWNHOLE COMMINGLING

2040 S. Pacheco Santa Fe, New Mexico 87505-6429

Form C-107-A New 3-12-96

**APPROVAL PROCESS:** 

\_X\_ Administrative \_\_\_Hearing

**EXISTING WELLBORE** 

X\_YES \_\_NO

#### PO Box 4289, Farmington, NM 87499 **Burlington Resources Oil and Gas** M 18-28N-05W San Juan 28-5 Unit #34 Rio Arriba Unit Ltr. - Sec - Twp - Rge Well No. County Spacing Unit Lease Types: (check 1 or more) API NO. \_30-039-07403\_ 7460

Upper Zone

Blanco Mesaverde - 72319

5152'-5686'

Gas

Federal

TITLE Production Engineer DATE 07-13-98

\_TELEPHONE NO. ( <u>505</u> ) <u>326-9700</u>

Intermediate Zone

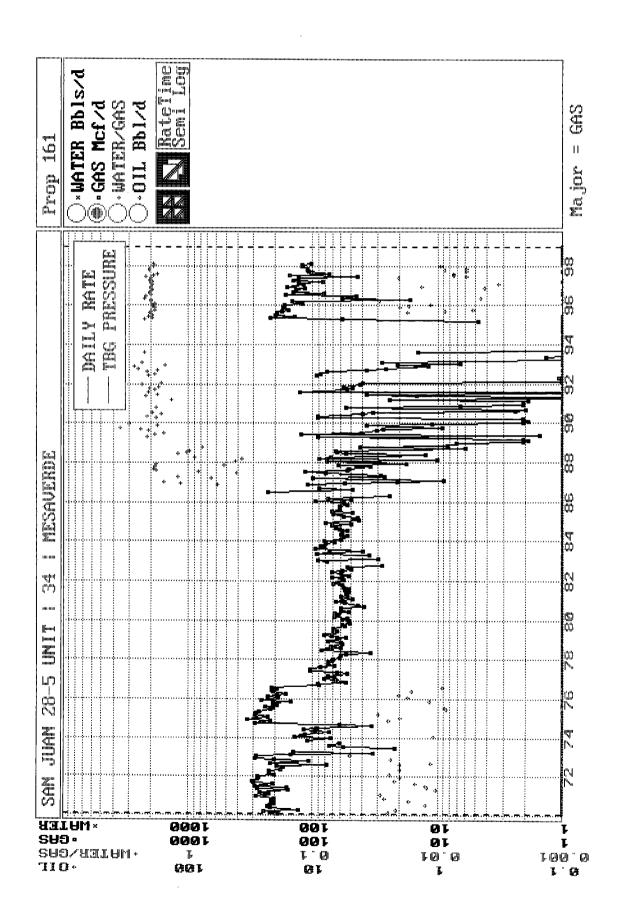
\_ , State .

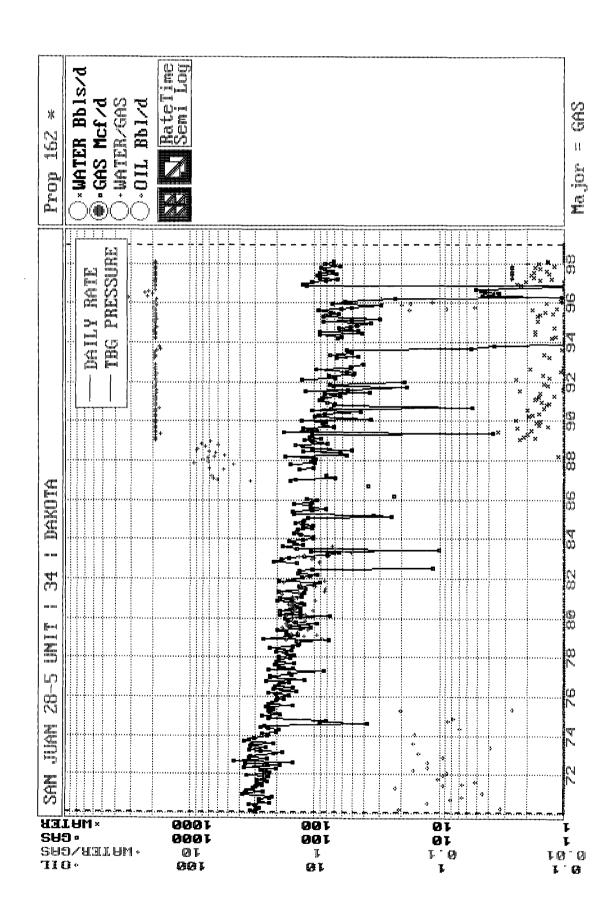
Basin Dakota - 71599

7708'-7904'

Gas

| (Oil Oil Gas)                                                                                                                                                                           |                                                                                                                                                                                                                                     |                                                                                                                      |                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 4. Method of Production (Flowing or Artificial Lift)                                                                                                                                    | Flowing                                                                                                                                                                                                                             |                                                                                                                      | Flowing                                                                 |
| 5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current                                                                                                                   | (Current)<br>a. 539 psi<br>(see attachment)                                                                                                                                                                                         |                                                                                                                      | a. 456 psi (see attachment)                                             |
| Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original                                                                                                     | (Original)<br>b. 1294 psi<br>(see attachment)                                                                                                                                                                                       |                                                                                                                      | b. 3199 psi (see attachment)                                            |
| 6. Oil Gravity (°API) or<br>Gas BTU Content                                                                                                                                             | BTU 1193                                                                                                                                                                                                                            |                                                                                                                      | BTU 1042                                                                |
| 7. Producing or Shut-In?                                                                                                                                                                | Producing                                                                                                                                                                                                                           |                                                                                                                      | Producing                                                               |
| Production Marginal? (yes or no)                                                                                                                                                        | Yes                                                                                                                                                                                                                                 |                                                                                                                      | 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<br>Rates:                                                                                                                                                                                                                 |                                                                                                                      | Date: N/A<br>Rates:                                                     |
| * If Producing, give data and oil/gas/water water of recent test (within 60 days)                                                                                                       | Date: 6/18/98  Rates: 99 mcfd 0.7 bopd                                                                                                                                                                                              | ,                                                                                                                    | Date: 6/18/98<br>Rates: 69 mcfd<br>0.0 bopd                             |
| 8. Fixed Percentage Allocation<br>Formula -% for each zone<br>(total of %'s to equal 100%)                                                                                              | Will be supplied upon completion.                                                                                                                                                                                                   |                                                                                                                      | Will be supplied upon completion.                                       |
| Have all offset operators been 11. Will cross-flow occur? <u>X</u> Ye                                                                                                                   | d royalty interests identical in all<br>ding, and royalty interests been i<br>given written notice of the prope                                                                                                                     | commingled zones?<br>notified by certified mail?<br>osed downhole commingling?<br>patible, will the formations not b | Yes _X_No<br>_Yes _X_No<br>_X_YesNo<br>pe damaged, will any cross-flowe |
| 12. Are all produced fluids from all                                                                                                                                                    | commingled zones compatible v                                                                                                                                                                                                       | with each other? X Yes                                                                                               | No                                                                      |
| 13. Will the value of production be                                                                                                                                                     | –                                                                                                                                                                                                                                   | , ,                                                                                                                  | •                                                                       |
| 14. If this well is on, or communit<br>Bureau of Land Management ha                                                                                                                     | ized with, state or federal land:<br>as been notified in writing of this                                                                                                                                                            | s, either the Commissioner of F<br>application. <u>X</u> Yes No                                                      | Public Lands or the United State                                        |
| 15. NMOCD Reference Cases for R                                                                                                                                                         | Rule 303(D) Exceptions: ORDER                                                                                                                                                                                                       | NO(S). <u>R-10695</u> attached                                                                                       |                                                                         |
|                                                                                                                                                                                         | to be commingled showing its s<br>reach zone for at least one year<br>oduction history, estimated prod<br>cation method or formula.<br>I offset operators.<br>orking, overriding, and royalty in<br>ments, data, or documents requi |                                                                                                                      |                                                                         |
|                                                                                                                                                                                         |                                                                                                                                                                                                                                     |                                                                                                                      |                                                                         |
| I hereby certify that the infor                                                                                                                                                         | nation ab <u>ove</u> is true and co                                                                                                                                                                                                 | mplete to the best of my kno                                                                                         | owledge and belief.                                                     |





# San Juan 28-5 Unit #34 Bottom Hole Pressures Flowing and Static BHP

### **Cullender and Smith Method**

Version 1.0 1/14/98

| Mesaverde                                                                                                                                                                                                                                            | Dakota                                                                                                                                                                                                                                                               |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| MV-Current                                                                                                                                                                                                                                           | DK-Current                                                                                                                                                                                                                                                           |  |  |  |  |
| GAS GRAVITY 0.706 COND. OR MISC. (C/M) C %N2 0.16 %CO2 0.98 %H2S 0 DIAMETER (IN) 7 DEPTH (FT) 5419 SURFACE TEMPERATURE (DEG F) 60 BOTTOMHOLE TEMPERATURE (DEG F) 121 FLOWRATE (MCFPD) 0 SURFACE PRESSURE (PSIA) 467 BOTTOMHOLE PRESSURE (PSIA) 538.6 | GAS GRAVITY COND. OR MISC. (C/M) %N2 %CO2 1.56 %H2S DIAMETER (IN) DEPTH (FT) SURFACE TEMPERATURE (DEG F) BOTTOMHOLE TEMPERATURE (DEG F) FLOWRATE (MCFPD) SURFACE PRESSURE (PSIA)  BOTTOMHOLE PRESSURE (PSIA)  456.1                                                  |  |  |  |  |
| MV-Original                                                                                                                                                                                                                                          | <u>DK-Original</u>                                                                                                                                                                                                                                                   |  |  |  |  |
| GAS GRAVITY COND. OR MISC. (C/M)  %N2 0.16 %CO2 0.98 %H2S 0 DIAMETER (IN) 7 DEPTH (FT) SURFACE TEMPERATURE (DEG F) BOTTOMHOLE TEMPERATURE (DEG F) 121 FLOWRATE (MCFPD) SURFACE PRESSURE (PSIA) 1101  BOTTOMHOLE PRESSURE (PSIA) 1294.0               | GAS GRAVITY 0.61  COND. OR MISC. (C/M) C  %N2 0.45  %CO2 1.56  %H2S 0  DIAMETER (IN) 2.375  DEPTH (FT) 7806  SURFACE TEMPERATURE (DEG F) 60  BOTTOMHOLE TEMPERATURE (DEG F) 168  FLOWRATE (MCFPD) 0  SURFACE PRESSURE (PSIA) 2652  BOTTOMHOLE PRESSURE (PSIA) 3199.0 |  |  |  |  |

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

 $\mathcal{K}(D) = \{ (1, \dots, 1, \dots, n) \mid 1 \leq n \}$ 

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                                                                                                            |                  |             |                 |                              |                  |                                |              |                             |                                               |  |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------|-----------------|------------------------------|------------------|--------------------------------|--------------|-----------------------------|-----------------------------------------------|--|
| ¹ A                      | PI Numbe                                                                                                                                             | SC.              |             | Pool Cod        | е                            | ³Pool Name       |                                |              |                             |                                               |  |
| 30-039                   | -0740                                                                                                                                                | 3                | 723         | 19/715          | lanco Mesaverde/Basin Dakota |                  |                                |              |                             |                                               |  |
|                          |                                                                                                                                                      |                  |             |                 |                              | y Name           |                                |              | <sup>6</sup> W∈             | ell Number                                    |  |
| 7460                     | 0                                                                                                                                                    |                  |             | S               | AN JUAN                      | 28-5 UNIT        |                                |              |                             | 34                                            |  |
| 70GRID N                 | ٧٥.                                                                                                                                                  |                  |             |                 | °Operator                    |                  |                                |              | °E                          | levation                                      |  |
| 14538                    |                                                                                                                                                      |                  | BURL:       | INGTON          | RESOURCE!                    | S OIL & GAS      | COMPANY                        |              | 1                           | 6525 '                                        |  |
|                          |                                                                                                                                                      |                  |             | 1               | <sup>lo</sup> Surface        | Location         |                                |              |                             |                                               |  |
| UL or lot no.            | Section                                                                                                                                              | Township         | Range       | Lot Idn         | Feet from the                | North/South line | Feet from the                  | East/We      | est line                    | County<br>RIO                                 |  |
| М                        | 18                                                                                                                                                   | 28N              | 5W          |                 | 990                          | SOUTH            | 990                            | WE           | ST                          | ARRIBA                                        |  |
|                          |                                                                                                                                                      | <sup>11</sup> Bo | ottom       | Hole L          | ocation I                    | f Different      | From Surf                      | ace          |                             |                                               |  |
| UL or lot no.            | Section                                                                                                                                              | Township         | Range       | Lot Ion         | Feet from the                | North/South line | Feet from the                  | East/We      | est line                    | County                                        |  |
|                          |                                                                                                                                                      |                  |             |                 |                              |                  |                                |              |                             |                                               |  |
| MV-S/32                  |                                                                                                                                                      | 13 Joint or Inf  | .11 14 Cons | solidation Code | <sup>15</sup> Order No.      |                  | •                              |              | •                           |                                               |  |
| DK-S/32                  |                                                                                                                                                      |                  |             |                 |                              |                  |                                |              |                             |                                               |  |
| NO ALLOW                 | 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 NOT RE                | SURVE                                                                                                                                                | YED, PF          | REPAR       | ED FROM         | 1                            |                  | <sup>17</sup> OPER             | ATOR         | CERTI                       | FICATION                                      |  |
| A PLAT DATED 11-26-58 BY |                                                                                                                                                      |                  |             |                 |                              |                  | I hereby cert<br>true and comp | ify that the | e information<br>best of my | n contained herein is<br>knowledge and belief |  |
| DAVID                    | O. VI                                                                                                                                                | LVEN             |             |                 |                              | i<br>1           |                                |              |                             |                                               |  |
|                          |                                                                                                                                                      |                  |             | l               |                              |                  |                                |              |                             | i                                             |  |
|                          |                                                                                                                                                      |                  |             |                 |                              | !                | <b>\</b>                       |              |                             |                                               |  |
|                          |                                                                                                                                                      | ı                |             | i<br>I          |                              |                  |                                |              |                             |                                               |  |

Signature Printed Name Title 18 SURVEYOR CERTIFICATION 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. JUNE 25, 1998 Date of Survey E OF ED WA 990' W MEXICO 990 Certificate Pupper STON

Page No.: 1
Print Time: Tue May 12 10:20:08 1998
Property ID: 161
Property Name: SAN JUAN 28-5 UNIT | 34 | MV
Table Name: S:\ARIES\78LTL\TEST.DBF

| <u>DATE</u>                                                                                              | CUM_OIL-<br>Bbl | CUM_GAS<br>Mcf                                                                          | M_SIWHP<br>Psi                                                                 |          |           |              |    |
|----------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------|-----------|--------------|----|
| 07/11/59<br>11/09/70<br>06/22/71<br>06/07/72<br>07/23/73<br>01/11/74<br>11/11/74<br>04/29/76<br>05/23/78 |                 | 0<br>900326<br>952832<br>1040016<br>1098382<br>1110197<br>1146274<br>1271938<br>1343476 | 1101.0<br>640.0<br>611.0<br>620.0<br>626.0<br>608.0<br>608.0<br>488.0<br>659.0 | Original |           |              |    |
| 05/20/82<br>07/20/84<br>09/19/86<br>11/28/89<br>08/26/91<br>06/19/95<br>04/01/98                         |                 | 1431859<br>1478872<br>1527665<br>1579030<br>1595303<br>1626718<br>1753814               | 689.0<br>678.0<br>621.0<br>612.0<br>532.0<br>531.0                             | Current  | Estimated | from P/z dat | ·& |

Page No.: 3
Print Time: Fri May 08 08:28:38 1998
Property ID: 162
Property Name: SAN JUAN 28-5 UNIT | 34 | DAKOTA
Table Name: S:\ARIES\78LTL\TEST.DBF

| DATE     | CUM_OIL-<br>Bbl | CUM_GAS<br>Mcf | M_SIWHP<br>Psi |          |           |               |
|----------|-----------------|----------------|----------------|----------|-----------|---------------|
| 07/11/59 |                 | 0              | 2652.0         | Original |           |               |
| 08/05/59 |                 | 0              | 2651.0         | 5        |           |               |
| 10/29/59 |                 | 47000          | 1838.0         |          |           |               |
| 09/22/60 |                 | 297000         | 1130.0         |          |           |               |
| 06/13/61 |                 | 423000         | 1133.0         |          |           |               |
| 09/09/62 |                 | 538000         | 1287.0         |          |           |               |
| 07/16/63 |                 | 610000         | 1268.0         |          |           |               |
| 01/24/64 |                 | 643000         | 1373.0         |          |           |               |
| 09/01/65 |                 | 863000         | 1038.0         |          |           |               |
| 08/19/66 |                 | 971000         | 1112.0         |          |           |               |
| 03/07/67 |                 | 1038000        | 1000.0         |          |           |               |
| 03/01/68 |                 | 1140000        | 1058.0         |          |           |               |
| 07/28/70 |                 | 1359073        | 838.0          |          |           |               |
| 06/22/71 |                 | 1458158        | 707.0          |          |           |               |
| 06/07/72 |                 | 1555805        | 662.0          |          |           |               |
| 07/23/73 |                 | 1671515        | 606.0          |          |           |               |
| 12/20/74 |                 | 1788002        | 695.0          |          |           |               |
| 05/05/75 |                 | 1822787        | 332.0          |          |           |               |
| 07/05/77 |                 | 1973385        | 636.0          |          |           |               |
| 10/04/79 |                 | 2107669        | 572.0          |          |           |               |
| 08/12/81 |                 | 2206797        | 577.0          |          |           |               |
| 02/03/84 |                 | 2311723        | 535.0          |          |           |               |
| 11/20/85 |                 | 2385271        | 514.0          |          |           |               |
| 10/04/88 |                 | 2457897        | 432.0          |          |           |               |
| 04/22/90 |                 | 2527297        | 430.0          |          |           | 0 -, 11       |
| 04/01/98 |                 | 2672850        | 387.0          | Current  | Estimated | from P/z data |

# Package Preparation Volume Data

| DPNo: 534          | 16A - 1513       | SAN JUAN 28-5     | UNIT         | 3          |             |             | Fon        | m: MY       |      |
|--------------------|------------------|-------------------|--------------|------------|-------------|-------------|------------|-------------|------|
| Supt: 60 Pipeline: | KEN RAYE<br>EPNG | SON F<br>Plunger: | F: 335<br>No | LARY BYARS | ual: Yes    | MS:         | 319 STEVE  |             | No   |
| ripeille.          |                  | riunger.          | 110          | ····       | uai. 165    |             | Compre     | #88UL.      | NU   |
| <u>Ov</u>          | vnership (No     | Trust)            |              | <u>Pr</u>  | ior Year    |             | <u>Cur</u> | rent Year   |      |
|                    | <u>Gas</u>       | <u>Oil</u>        |              |            |             | <u>Days</u> |            |             | Days |
| GWI:               | 73.1659%         | 73.1659%          |              | MCF/M      | <b>BOPM</b> | <u>On</u>   | MCF/M      | <b>BOPM</b> | On   |
| GNI:               | 62.3562%         | 62.3562%          | Jan          | 3,622      | 10.0        | 31          | 3,770      | 0.0         | 31   |
|                    |                  |                   | Feb          | 4,063      | 0.0         | 28          | 3,126      | 0.0         | 28   |
| Volumes            |                  |                   | Mar          | 2,544      | 0.0         | 31          | 3,306      | 0.0         | 31   |
| (Days On)          | MCF              | D BOPD            | Apr          | 4,405      | 0.0         | 30          | 3,422      | 0.0         | 30   |
| 7 Day Avg          | 10               | 8 6.5             | May          | 3,995      | 63.0        | 31          | 0          | 0.0         | 27.9 |
| 30 Day Avg         | 11               | 1 0.8             | Jun          | 1,339      | 18.0        | 21          | 0          | 0.0         | 0    |
| 60 Day Avg         | 11:              | 2 0.4             | Jul          | 4,701      | 23.0        | 31          | 0          | 0.0         | 0    |
| 3 Mo Avg           | 11               | 1 0.0             | Aug          | 2,255      | 23.0        | 31          | 0          | 0.0         | 0    |
| 6 Mo Avg           | 114              | 4 0.3             | Sept         | 3,306      | 18.0        | 30          | 0          | 0.0         | 0    |
| 12 MoAvg           | 113              | 2 0.6             | Oct          | 3,421      | 27.0        | 31          | 0          | 0.0         | 0    |
|                    |                  |                   | Nov          | 3,396      | 18.0        | 30          | 0          | 0.0         | 0    |
| <u>Volumes</u>     |                  |                   | Dec          | 3,699      | 29.0        | 31          | 0          | 0.0         | 0    |
| (Days in Mo        | nth) MCF         | D BOPD            | Total        | 40.746     | 222.0       |             | 40.004     |             |      |
| 30 Day Avg         | 99               | 0.7               | TOLAI        | 40,746     | 229.0       |             | 13,624     | 0.0         |      |
| 60 Day Avg         | 100              | 6 0.4             |              |            |             |             |            |             |      |
| 3 Mo Avg           | 11               | 1 0.0             |              |            |             |             | Prir       | nt Form     |      |
| 6 Mo Avg           | 114              | 4 0.3             |              |            |             |             |            |             |      |
| 12 Mo Avg          | 109              | 9 0.6             | **           |            |             |             | Exit Vo    | lumes l     | Data |
| 6/18/98            |                  |                   |              |            |             |             |            |             |      |

## Package Preparation Volume Data

| DPNo: 5341     | 58 # S       | AN JUAN 28-5 | UNIT    | 34         | 100 miles   |             | Fon        | mt DK       |           |
|----------------|--------------|--------------|---------|------------|-------------|-------------|------------|-------------|-----------|
| Supt: 60       | KEN RAYB     |              | F: 335  | LARY BYARS |             | MS:         |            |             |           |
| Pipeline: i    | EPNG         | Plunger:     | No      | ان<br>ان   | ual: Yes    |             | Compre     | essor:      | No        |
| Ow             | ynership (No | Trust)       |         | <u>Pr</u>  | ior Year    |             | <u>Cur</u> | rent Year   |           |
|                | <u>Gas</u>   | <u>Oil</u>   |         |            |             | <u>Days</u> |            |             | Days      |
| GWI:           | 69.6124%     | 69.6124%     |         | MCF/M      | <b>BOPM</b> | <u>On</u>   | MCF/M      | <b>BOPM</b> | <u>On</u> |
| GNI:           | 58.8960%     | 58.8960%     | Jan     | 3,181      | 0.0         | 31          | 2,048      | 0.0         | 31        |
|                |              |              | Feb     | 2,434      | 0.0         | 28          | 2,082      | 0.0         | 28        |
| <u>Volumes</u> |              |              | Mar     | 1,945      | 0.0         | 31          | 2,085      | 0.0         | 31        |
| (Days On)      | MCF          | D BOPD       | Apr     | 2,739      | 0.0         | 30          | 2,654      | 0.0         | 30        |
| 7 Day Avg      | 103          | 3 0.0        | May     | 2,863      | 0.0         | 31          | 0          | 0.0         | 27.9      |
| 30 Day Avg     | 77           | 0.0          | Jun     | 2,025      | 0.0         | 23.1        | 0          | 0.0         | 0         |
| 60 Day Avg     | 83           | 0.0          | Jul     | 2,750      | 0.0         | 31          | 0          | 0.0         | 0         |
| 3 Mo Avg       | 77           | 0.0          | Aug     | 2,126      | 0.0         | 31          | 0          | 0.0         | 0         |
| 6 Mo Avg       | 73           | 0.0          | Sept    | 2,460      | 0.0         | 30          | 0          | 0.0         | 0         |
| 12 MoAvg       | 78           | 0.0          | Oct     | 2,655      | 0.0         | 31          | 0          | 0.0         | 0         |
|                | ,            |              | Nov     | 1,852      | 0.0         | 30          | 0          | 0.0         | 0         |
| <u>Volumes</u> |              |              | Dec     | 2,474      | 0.0         | 31          | 0          | 0.0         | 0         |
| (Days in Mo    | nth) MCF     | D BOPD       | Total   | 29,504     | 0.0         |             | 8.869      | 0.0         |           |
| 30 Day Avg     | 69           | 0.0          | · Ottai | 20,004     | 0.0         |             | 0,009      | 0.0         |           |
| 60 Day Avg     | 78           | 0.0          |         |            |             |             |            |             | 1         |
| 3 Mo Avg       | 77           | 0.0          |         |            |             |             | Prii       | ıt Form     |           |
| 6 Mo Avg       | 72           | 0.0          |         |            |             |             |            |             |           |
| 12 Mo Avg      | 77           | 0.0          |         |            |             |             | Exit Vo    | lumes [     | )ata .    |
| 6/18/98        |              |              |         |            |             |             |            |             |           |

|                   | 9                      | 07                     |                              | 41A<br><b>⊕</b>            | 38<br><b>⊕</b>      | 53M<br><b>⊞</b>            |
|-------------------|------------------------|------------------------|------------------------------|----------------------------|---------------------|----------------------------|
| 136<br>🔀          | 20<br>\$ 12<br>20R     | 20A<br>₩               | 12<br><b>8</b><br><b>X</b> 7 | 12A<br>7 <b>⊕</b> 器<br>79E | <b>⊠ 6</b> 85E 8    | 85<br><b>×</b>             |
| 5<br><b>&amp;</b> | 57A<br><b>©</b>        | 71<br>�<br>106<br>⊠    | 29A<br>&9<br>61E             | 29<br>� 61<br>図            | 28A<br>• •          | 75<br>⊠                    |
| 101               | 13<br>57 100<br>\$ 8   | SJ 28                  | 1;<br>−5 Uni:<br>⊠           |                            | 33 1'               | 7 зза                      |
|                   | 99M<br><b>88</b><br>24 | 99<br><b>⇔</b> 器<br>65 | 57M<br><b>⊠</b>              | 57<br>4 ⊠<br><b>©</b>      | 54E                 | 63<br>⊠14<br>❤<br>Ø<br>63E |
| 58A<br><b>©</b>   | 152 18<br><b>X ©</b>   | 65A<br><b>♥</b>        | 35<br><b>28</b>              |                            | 54 <b>⊗</b><br>⊠ 17 | <b>⊠</b>                   |
| 102<br>図          |                        | 10 114                 | 59M<br><b>88</b>             | 32<br>8 59                 |                     | 60<br>1 ₩                  |

PLH 5/7/98

SJ 28-5 Unit 34 Sec. 18, T28N, R5W Mesaverde/Dakota

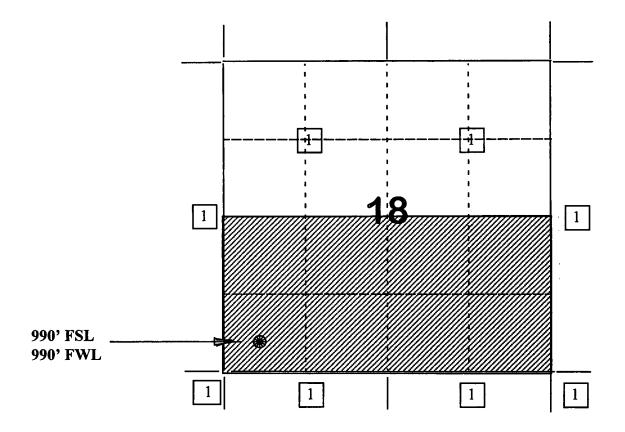
#### **BURLINGTON RESOURCES OIL AND GAS COMPANY**

#### San Juan 28-5 Unit #34

#### **OFFSET OPERATOR/OWNER PLAT**

## Mesaverde / Dakota Formations Commingle Well

Township 28 North, Range 5 West



1) Burlington Resources

#### 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. 11627 ORDER NO. R-10695

APPLICATION OF BURLINGTON RESOURCES OIL & GAS COMPANY FOR THE ESTABLISHMENT OF A DOWNHOLE COMMINGLING "REFERENCE CASE" FOR ITS SAN JUAN 28-5 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 28-5 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 28-5 Unit which encompasses some 17,399 acres in Township 28 North, Range 5 West, NMPM, San Juan County, New Mexico.
- (5) Within the San Juan 28-5 Unit, the applicant currently operates sixty-seven (67) Basin-Dakota Gas Pool wells, seventy-one (71) Blanco-Mesaverde Gas Pool wells, sixteen (16) Gobernador-Pictured Cliffs, Oso-Pictured Cliffs and Tapacito-Pictured Cliffs Gas Pool wells, and nineteen (19) 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 28-5 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 28-5 Unit;

- 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 28-5 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 28-5 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 28-5 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 1,258 MMCFG and 77 MMCFG, respectively;
  - c) the average initial producing rate for a newly drilled or recompleted Dakota and Pictured Cliffs gas well is approximately 276 MCFGD and 136 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 28-5 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 28-5 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 3,149 psi and 1,143 psi, respectively; and,
- b) the average current shut-in bottomhole pressure within the Dakota and Pictured Cliffs formations are approximately 1,059 psi and 714 psi, respectively.
- (10) There is sufficient pressure data available within the San Juan 28-5 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 28-5 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 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 28-5 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 28-5 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 28-5 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 28-5 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 28-5 Unit Area will benefit working, royalty, and overriding royalty interest owners. In addition, the downhole commingling of wells within the San Juan 28-5 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 28-5 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 28-5 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 28-5 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 28-5 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 28-5 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 28-5 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

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WILLIAM J. LeMAY

Director

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