

## DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

## DISTRICT II

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

## DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico  
Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429Form C-107-A  
New 3-12-96

## APPROVAL PROCESS :

☒ Administrative ☐ Hearing

## EXISTING WELLBORE

☒ YES ☐ NO

## APPLICATION FOR DOWNHOLE COMMINGLING

Burlington Resources Oil &amp; Gas Company

PO Box 4289, Farmington, NM 87499

Operator

Address

Newberry (note: DHC-1855 issued for MV&amp;Dk) 12M

P 04-31N-12W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7360 API NO. 30-045-29568 Federal ☒ State ☐ 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   | Wildcat Mancos   | Basin Dakota - 71599  |
| 2. Top and Bottom of Pay Section (Perforations)   | will be supplied upon completion   | 5728-5812'   | 7052-7220'  |
| 3. Type of production (Oil or Gas)  | gas  | Oil/gas  | gas   |
| 4. Method of Production (Flowing or Artificial Lift)  | flowing  | pumping  | flowing   |
| 5. Bottomhole Pressure<br>Oil Zones - Artificial Lift:<br>Estimated Current<br>Gas & Oil - Flowing:<br>Measured Current<br>All Gas Zones:<br>Estimated or Measured Original                   | (Current)<br>a. 551 psi (see attachment)<br><br>(Original)<br>b. 1244 psi (see attachment) | a. 1100 psi (see attachment)<br><br>b. 1100 psi (see attachment) | a. 853 psi (see attachment)<br><br>b. 2531 psi (see attachment) |
| 6. Oil Gravity (API) or Gas BTU Content   | BTU 1227   | 46° API @ 62°  | BTU 1161  |
| 7. Producing or Shut-In?  | shut in  | producing  | shut in   |
| Production Marginal? (yes or no)  | 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 | Date: n/a<br>Rates:  | 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: n/a<br>Rates:  | Date: 11/23/98<br>Rates: 138 MCFD/20 BOPD/2 BWPD                 | Date: n/a<br>Rates:   |
| 8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%)  | Oil: % Gas: %<br>will be supplied upon completion  | Oil: % Gas: %<br>will be supplied upon completion                | 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 ☐ No11. 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 ☐ No13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). Reference Order attached

## 16. ATTACHMENTS:

- \* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- \* Production curve for each zone for at least one year. (If not available, attach explanation.)
- \* For zones with no production history, estimated production rates and supporting data.
- \* Data to support allocation method or formula.
- \* Notification list of all offset operators.
- \* Notification list of working, overriding, and royalty interests for uncommon interest cases.
- \* Any additional statements, data, or documents required to support commingling.

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

SIGNATURE TITLE: Production Engineer DATE: 12-15-98

TYPE OR PRINT NAME Jennifer Dobson TELEPHONE NO. ( 505 ) 326-9700

II  
ower OO, Artesia, NM 88211-0719Instructions on back  
Submit to Appropriate District OfficeState Lease - 4 Copies  
Fee Lease - 3 CopiesDistrict III  
1000 Rio Brazos Rd., Aztec, NM 87410OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088District IV  
PO Box 2088, Santa Fe, NM 87504-2088☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

|                            |   |   |
|----------------------------|---|---|
| API Number<br>30-045-29568 | Pool Code<br>72319/71599                                | Pool Name<br>Blanco Mesaverde/Wildcat Mancos/Basin Dakota |
| Property Code<br>7360      | Property Name<br>NEWBERRY                               | Well Number<br>12M  |
| OGRID No.<br>14538         | Operator Name<br>BURLINGTON RESOURCES OIL & GAS COMPANY | Elevation<br>6104'  |

## 10 Surface Location

| UL or lot no. | Section | Township | Range | Lot 10n | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| P             | 4       | 31N      | 12W   |         | 970           | South            | 1125          | East           | SAN JUAN |

## 11 Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot 10n | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
|               |         |          |       |         |               |                  |               |                |        |

|   |                    |                       |              |
|---|--------------------|-----------------------|--------------|
| 12 Dedication Acres<br>MV-S/320, Man-160<br>DK-E/320.37 | 13 Joint or Infill | 14 Consolidation Code | 15 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

|          |          |          |  |
|----------|----------|----------|--|
| 16       | 2640.66' | 2646.60' | 17 OPERATOR CERTIFICATION  |
| 1269.84' | 4        | 3        | I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  |
| 1302.84' |          | 2        | <i>Peggy Bradfield</i><br>Signature  |
|          |          | 1        | Peggy Bradfield<br>Printed Name  |
|          |          |          | Regulatory Administrator<br>Title  |
|          |          |          | 6-23-98<br>Date  |
|          |          |          | 18 SURVEYOR CERTIFICATION  |
|          |          |          | I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. |
|          |          |          | DECEMBER 10, 1997<br>Date of Survey  |
|          |          |          | Signature and Seal of Surveyor   |
|          |          |          | NEALE C. EDWARDS<br>NEW MEXICO<br>6857   |
|          |          |          | Certificate  |

### **Definition of Terms Used in Analysis and Plots**

|                   |   |
|-------------------|---|
| <b>STP</b>        | Surface treating pressures (psi)                                      |
| <b>HESBHP</b>     | Service company calculated bottomhole treating pressures (psi)        |
| <b>TASBHP</b>     | ProTechnics bottomhole pressures recorded in tool memory (psi)        |
| <b>TASSurfBHP</b> | ProTechnics bottomhole pressures transmitted to the surface (psi)     |
| <b>TASBHT</b>     | ProTechnics bottomhole temperatures recorded in tool memory (degF)    |
| <b>TASSurfBHT</b> | ProTechnics bottomhole temperatures transmitted to the surface (degF) |
| <b>SL/Rate</b>    | Service company surface slurry injection rate (bpm)                   |

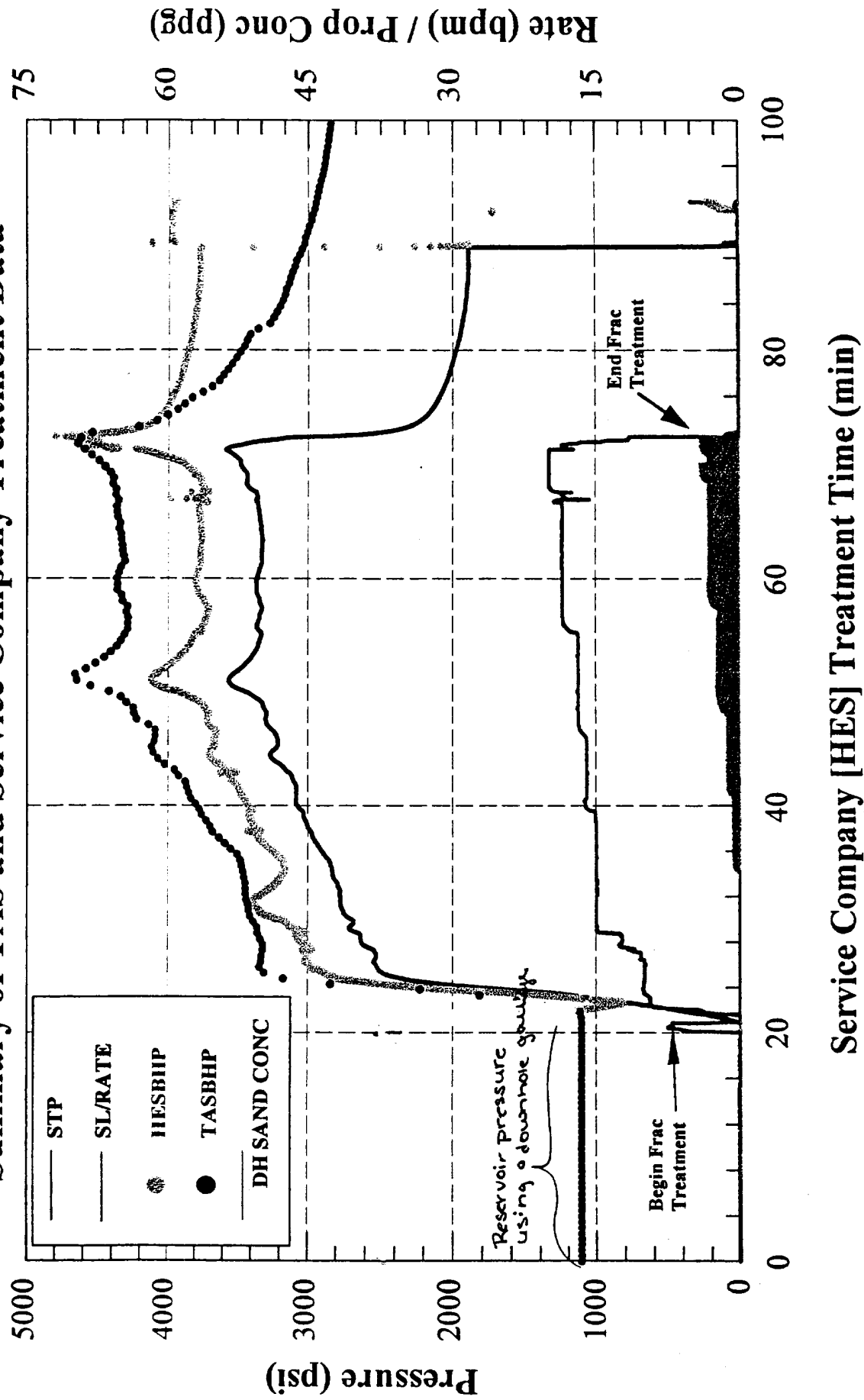
### **Interpretation of TAS Data and Analysis of Test**

1. Bottomhole pressure and temperature data transmitted to the surface were consistent with those stored downhole in TAS tool memory.
2. Based on the shut-in prior to the frac treatment, static reservoir pressure and reservoir temperature at a sensor depth of 5,721 ft were approximately 1,100 psi and 170° F, respectively.
3. The service company calculated bottomhole pressures were consistently lower than the TAS measured bottomhole pressures, ostensibly due to high estimated friction pressures.
4. The service company calculated bottomhole pressures near the end of the treatment suggest that a screenout was imminent, while the TAS measured bottomhole pressures do not indicate an imminent screenout.
5. The ascending TAS measured bottomhole pressures up through the middle of the proppant ramp suggest high near-wellbore friction.

**ProTechnics, a Core Laboratories Company, does not warrant the accuracy of any interpretation or conclusions based on the data contained herein. ProTechnics will not be liable for direct or indirect losses as a result of the use of the data or interpretation in this report.**

**This report is based on the pressure and temperature data recorded by ProTechnics's Telemetry Acquisition System. All well and treatment information was supplied by the operator or service company.**

# Burlington Resources Newberry #12M Summary of TAS and Service Company Treatment Data



DATE: December 14, 1998  
NAME: NEWBERRY 12M  
FORM: GALLUP

LOCATION  
UNIT: P  
SEC: 4  
TWN: 31N  
RNG: 12W

|      |                       |      |
|------|-----------------------|------|
| [32] | [33]                  | [34] |
| [5]  | [4]<br>Newberry 12M * | [3]  |
| [8]  | [9]                   | [10] |

T 32 N

T 31 N

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

**Conoco Inc.**  
**Attn: Lori Thorpe**  
**10 Desta Drive, Suite 100W**  
**Midland, TX 79705**

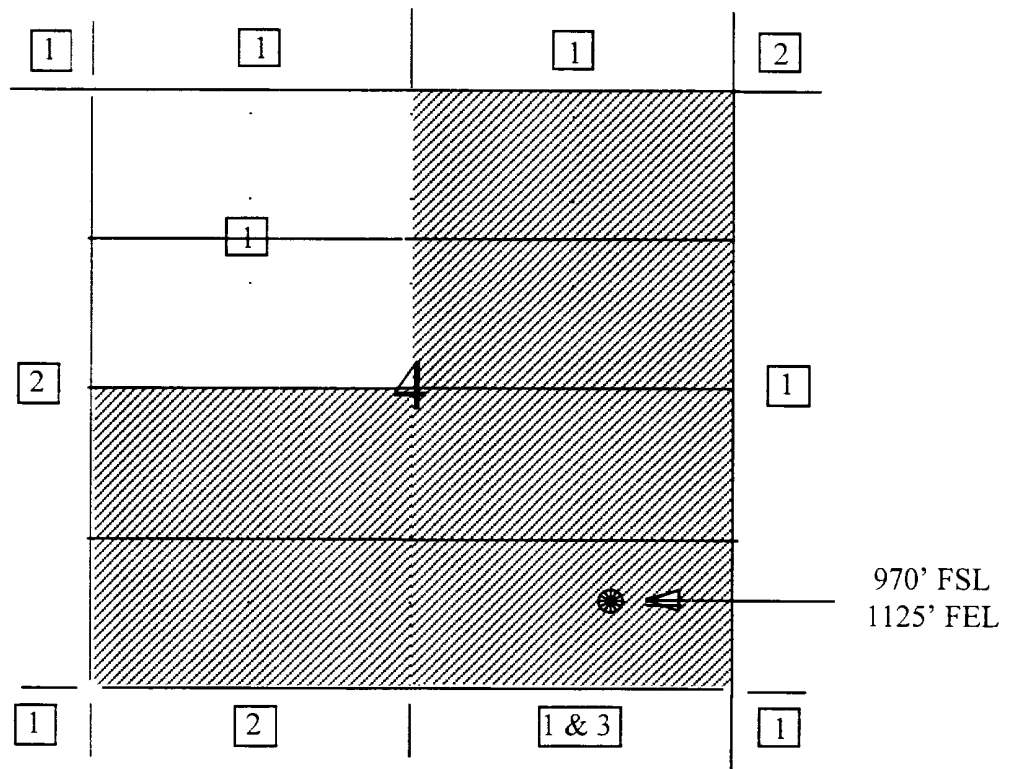
**Cross Timbers Oil Company**  
**Attn: Vaughn Vennerberg**  
**810 Houston Street, Suite 2000**  
**Fort Worth, TX 76102-6298**

**BURLINGTON RESOURCES OIL AND GAS COMPANY**

**Newberry #12M  
OFFSET OPERATOR \ OWNER PLAT  
Downhole Commingle**

**Mesaverde (S/2) / Mancos (SE/4) / Dakota (E/2)  
Formations Well**

**Township 31 North, Range 12 West**



- 1) Burlington Resources
- 2) Amoco Production Company  
c/o Bruce Zimney  
PO Box 800  
Denver, CO 80201
- 3) Conoco Inc.  
10 Desta Drive, Suite 100 W  
Midland, TX 79705-4500