BURLINGTON

SAN JUAN DIVISION

December 16, 1996

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

Re:

Johnston A Com G #17

800'FNL, 1080'FEL Section 36, T-26-N, R-06-W, Rio Arriba County, NM

API #30-039-20767

Dear Mr. LeMay:

This is a request for administrative approval for downhole commingling the Blanco Mesa Verde, Ensenada Gallup and Basin Dakota pools in the subject well. This well was originally drilled as a single Dakota. The Mesa Verde and Gallup pools were opened in 1996.

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

- Form C107A Application for Downhole Commingling; 1.
- C-102 plat for each zone showing its spacing unit and acreage dedication; 2.
- 3. Production curve for the Dakota;
- Notification list of offset operators; 4.
- Shut in wellhead pressure and calculated down hole pressure; 5.
- Nine-section plats for the Mesa Verde, Gallup and Dakota.

If you are a working, overriding or royalty interest owner in either of the above described pools, you are being notified of this application as a requirement of the New Mexico Oil Conservation Division Rule #303C. Burlington, as operator, believes this application will be in the best interest of all owners. If you have no objection to this commingling application, you do not have to respond to this notification. Upon establishment of production from this well, you will receive your proportionate share of revenues from the pool in which you own an interest according to the proposed allocation formula. The allocation formula is included showing the calculations.

Please let me know if you require additional data.

Stadfuld

Sincerely,

Peggy Bradfield

Regulatory/Compliance Administrator

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*) Drawer OD. Artesia. NM \$8211-6719

008 Rie Brans Rd., Aziec. NM 87418

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State of New Mexico

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088

Form C-1 Revised February 21. 19

instructions on ba Submit to Appropriate District Offi

State Lease - 4 Cop. Fee Lesse - J Cop:

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DISTRICT I

Operator

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

DISTRICT II

Burlington Resources Oil & Gas Company

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
Form C-107-A
New 3-12-96
APPROVAL PROCESS:

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

___ Administrative ___Hearing

EXISTING WELLBORE

| NO | YES | FOR DOWNHOLE COMMINGLING | APPLICATION | 3 |
|----|------------|-----------------------------------|-------------|---|
| | | PO Box 4289, Farmington, NM 87499 | | |
| | | Address | | |
| | Rio Arriba | A-36-26N-6W | 17 | |
| | | | | |

Johnston A Com G Well No. Unit Ltr. - Sec - Twp - Rge Lease __ API NO. 30-039-20767__Federal _____, State _X___, (and/or) Fee _ OGRID NO. _14538_____ Property Code __7207_ Intermediate Zone The following facts are submitted in support of downhole commingling: Lower Zone Pool Name and Pool Code Ensenada Galiup-96321 Basin Dakota - 71599 Blanco Mesaverde - 72319 7098-7357 2. Top and Bottom of Pay Section (Perforations) 6230-6582' 5084-5352 3. Type of production (Oil or Gas) 4. Method of Production (Flowing or Artificial Lift) Flowing **Flowing** Flowing (Current) a. 1330 psi 5. Bottomhole Pressure a. 1400 psi a. 642 psi Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original (Original) b 1330 psi b.1400 psi b. 2933 psi

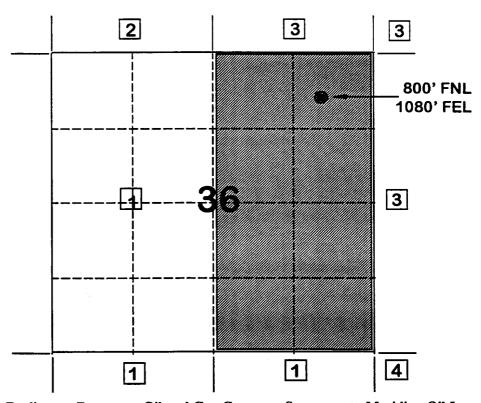
| 6. Oil Gravity (°API) or Gas BTU Content | 1120 | 1190 | 1140 |
|--|--|---|---|
| 7. Producing or Shut-In? | SI | SI | SI |
| Production Marginal? (yes or no) | Yes | Yes | No |
| * If Shut-In and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data | Date: New zone (See attachment) Rates: Mp po;. mp | Date: New zone (See attachment) Rates: | Date:11-31-95 Rates: 1.8 BOPD, 125 MCFGPD, no wtr |
| * If Producing, give data and oil/gas/water water of recent test (within 60 days) | Data: Rates: | Date: Rates: | Date: Rates: |
| 8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%) | Oil: Gas: 74 % | Oil: Gas: 10 % | Oil: Gas: 16 % |
| 10. Are all working, overriding, and If not, have all working, overriding Have all offset operators been go and the production be recovered, and working the production be recovered, and working the production be do and the production curve for a production curve for a production be do and the production curve for a production be do and the prod | royalty interests identical in all cong, and royalty interests been no liven written notice of the proposes. No If yes, are fluids comvill the allocation formula be reliated with the allocation of this application writing of this application between the commingled showing its spatial because one for at least one year, adduction history, estimated production method or formula. | providing rate projections or other commingled zones? tified by certified mail? ed downhole commingling? epatible, will the formations not liblex YesNo (If No, at each other?x Yes Yes Yes Yes No (If Yes, attach exter the Commissioner of Public onx Yes No O(S)R-10239 ecing unit and acreage dedication (If not available, attach explanation rates and supporting data. | er required data. Yes _X_No _X_YesNo _X_YesNo De damaged, will any cross-flowed attach explanation) No planation) Lands or the United States Bureau n. ion.) |
| (, , , | tapula TITLE_Regula | atoryAdministrator | DATE12-11-96 |
| TYPE OR PRINT NAME _Peggy | Bradfield TELE | EPHONE NO. (505) 32(| 6-9700 |

BURLINGTON RESOURCES OIL AND GAS COMPANY

Johnston A Com G #17 OFFSET OPERATOR \ OWNER PLAT

Gallup (NE/4)/Mesaverde (E/2)/Dakota (E/2) Formations Commingle Well

Township 26 North, Range 6 West



- 1) Burlington Resources Oil and Gas Company Successor to Meridian Oil Inc.
- 2) Caulkins Oil Company P.O. Box 340 Bloomfield, NM 87413

3) Amoco Production Company

Attn: Bruce Zimney P.O. Box 800 Denver, CO 80201

4) Conoco Inc. 10 Desta Drive, Suite 100W Midland, TX 79705-4500 Caulkins Oil Company 2100 Colorado Bank Building Denver, CO 80202

| 9. 1 101191-02 | 8. 1 078576-01 | 7. 1 075355-01 | 6. 1 057790-01 | 5. 1 040905-01 | 4. 1 038375-01 | 3. 1 017410-01 | 2. 1 013806-01 | 1. 1 013805-01 | PC OWN | DATE: 12/10/96 ***************** * OFFICE USE ONLY * |
|--|--|---|---|---|--|---|--|---|------------------|---|
| H LIMITED PARTNERSHIP PO BOX 2185 SANTA FE , NM 87504 SSN OR TAX ID: 85-0436556 | THEODORE J BLECHAR 138 LA CANADA WAY SANTA CRUZ , CA 95060 SSN OR TAX ID: 050-20-9179 | PEARL W SIEGENTHALER PO BOX 1020 ARTESIA , NM 88211 SSN OR TAX ID: 525-03-8115 | MATIAS A & EMELINE L ZAMORA REVOCABLE TRUST U/T/A 2/5/91 2862 PLAZA AMARILLA SANTA FE , NM 87505 SSN OR TAX ID: 525-46-7286 | ROBERT W SMITH & THELMA M SMITH CO-PERS REPS DAVID B GARTNER EST PO BOX 1034 PAGOSA SPRINGS , CO 81147 SSN OR TAX ID: 525-36-9095 | STATE OF NEW MEXICO PO BOX 1148 SANTA FE , NM 87501 SSN OR TAX ID: 85-6000565 | ANITA BRIGGS 712 RALEIGH ST OXFORD , NC 27565 SSN OR TAX ID: 457-54-4267 | MARTHA LOU DIXON 311 TAGGARD BURNET , TX 78611 SSN OR TAX ID: 450-30-4495 | THEODORE J BLECHAR EXECUTOR MARGARET ESTELLE BLECHAR ESTAT 138 LA CANADA WAY SANTA CRUZ , CA 95060 SSN OR TAX ID: 050-20-9179 | NAME AND ADDRESS | EL PASO PRODUCTION COMPANY EXHIBIT 'A' JOHNSTON A COM G #17 RIO ARRIBA,NEW MEXICO |
| B B B TOTAL | B TOTAL | B B TOTAL | B B TOTAL | B B TOTAL | A B B TOTAL | B B B TOTAL | 8 8 707AL | B B TOTAL | LSE/ TRT | |
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| | | | | 10. 1 999021-01 |
|-----------------|---------------------------|-----------------------|---------------|-----------------------------|
| | SSN OR TAX ID: 41-1400579 | FORT WORTH , TX 76102 | 801 CHERRY ST | BURLINGTON RESOURCES 0&G CO |
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**** DIVISION ORDER TOTAL ---->

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| | | | 3.125000 1.562500 4.687500 | RI RI RI TOTAL> | | 038375-01 STATE OF NEW MEXICO | 038 |
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| | | | 21.875000 10.100000 52.604167 0.420833 85.000000 | NWI TOTAL> | A PAY B PAY B PAY | 999021-01 BURLINGTON RESOURCES O&G CO | 9991 |
| | | | BPO % | REASON FOR SUSP INT TYPE | LR P/S REA | | OWNER |
| | | | | | | | BC: NONE |
| | Ä | | 012616803 | Y NM4201 012 | J | AS 43941A JOHNSTON A COM G 17 BURLINGTON RESOURCES 0&G CO | 81452000 GAS |
| DOS722NB 1 | PAGE: | ST COUNTY | PROPERTY | MERIDIAN OIL INC. DIVISION ORDER WITH BEARER CODE V BASE FILE PRO | MERID | DP NUM WELL NAME/OPERATOR | DATE: 12/10/96 |

| DIVISION ORDER WITH BEARER CODE | MERIDIAN OIL INC. |
|---------------------------------|-------------------|
| RER CODE | • |

DOS722NB PAGE: 2

DATE: 12/10/96

| DUNUER OWNER NAME O13805-01 MARGARET ESTELLE BLECHAR ESTAT B PAY 013806-01 MARTHA LOU DIXON B PAY 017410-01 ANITA BRIGGS 017410-01 ANITA BRIGGS 040905-01 DAVID GARTNER DECD 057790-01 MATIAS A & EMELINE L ZAMORA TR B PAY 075355-01 PEARL W SIEGENTHALER 078576-01 THEODORE J BLECHAR 078576-01 THEODORE J BLECHAR | | /10/96 PROD | # # 1 1 | MERIDIAN OIL INC. DIVISION ORDER WITH BEARER V BASE FILE V NM4201 | CODE | N 1 0 |
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| | | 040905 057790 075355 078576 101191 | Ë 8- | 8 PAY 8 PAY 8 PAY 9 PAY 9 PAY | | ORRI ORRI ORRI ORRI |

FIXED PERCENTAGE PRODUCTION ALLOCATION METHOD UTILIZING EXISTING PRODUCTION AND PITOT GAUGES

JOHNSON A COM G #17

BASIN DAKOTA/ENSENADA GALLUP/BLANCO MESA VERDE COMMINGLE Unit A, Sec. 36, T26N, R06W Rio Arriba County, New Mexico

Current Dakota Average Production (Q1, see attached production plot) = 125 MCF/D

Current Flowing Average tubing Pressure (Pwfs1) = 110 psi

Effective gas gradient = 0.02 psi/ft

Dakota midperf depth (D) = 7,225ft

Flowing well pressure (Pwf1) = Pwfs1 + D* 0.02 = 255 psi

Current Dakota Reservoir Pressure (Pr) = 642 psi

Turbulence Factor (n) = 0.75

*Standard for Basin Dakota

K = (0.703*kavg*h)/(u*zavg*Tr*ln(0.606*re/rw)

Deliverability Equation Q1 = $K*(Pr^2-Pwf1^2)^n = K*(642^2-255^2)^0.75 = K*14,301$

Flowing Average tubing Pressure (Pwfs2) = 0 psi *For Pitot test of total production

Flowing well pressure (Pwf2) = Pwfs2 + D*0.02 = 145 psi

Deliverability Equation Q2 = $K*(Pr^2-Pwf2^2)^n = K*(642^2-145^2)^0.75 = K*15,640$

 $Q2 = Q1 * (K*(Pr^2-Pwf2^2)^n)/(K*(Pr^2-Pwf1^2)^n) = 125*(15,640/14,301) = 137 MCF/D$

Total Flow Test (Q2) = 869 MCF/D

Dakota Portion of flow test = Q2/Qt = 137/869 MCF/D = 16%

Remaining Production Allocation = 84%

from Offset Analogy & Reference Case (R-10239) Data,

Mesa Verde Gas Production Allocation % = 74%,

Gallup Gas Production Allocation = 10%

Liquid Allocation based on Reference Case R-10239

Deliverability Equation Derived from "Worldwide Practical Petroleum Reservoir Engineering Methods", H. C. "Slip" Slider, pgs 298-315.

