

BLACKWOOD & NICHOLS CO., L.
1310 FIRST NATIONAL CENTER WEST
OKLAHOMA CITY, OKLAHOMA 73102
405 235-8505



February 7, 1983

United States Department of the Interior
Office of the Secretary
Minerals Management Service
South Central Region
P.O. Box 26124
Albuquerque, New Mexico 87125

State of New Mexico
Commissioner of Public Lands
Attention: Mr. Ray D. Graham
P.O. Box 1148
Santa Fe, New Mexico 87501

State of New Mexico
Oil Conservation Commission
Attention: Mr. Joe Ramey
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Northeast Blanco Unit
#1 - Section No. 929
San Juan and Rio Arriba Cos.
New Mexico

RE-APPLICATION FOR APPROVAL OF
INITIAL PARTICIPATING AREA
FOR THE FRUITLAND AND PICTURED
CLIFFS FORMATIONS
Effective December 12, 1979

Gentlemen:

Blackwood & Nichols Co., Ltd., as unit operator for the Northeast Blanco unit agreement, pursuant to the provisions of section 11 thereof, respectfully submits for your approval the selection of the following described lands to constitute the initial participating area for the Fruitland-Pictured Cliffs producing zone or formation, to wit:

All of sections 1, 11, 12, 13, 14, 15, 16, and
the south half of sections 9 and 10 in the
Township 31N, Range 7W, New Mexico Principal
Meridian, containing 4847.08 acres.

The producing interval within the Fruitland Formation and the Pictured Cliffs Formation is shown on the cross sections submitted with the geological and engineering report. Gas is currently being produced in paying quantities from the Fruitland and Pictured Cliffs Formations underlying the proposed initial participating area. New Mexico Oil Conservation Division Order No. 5772 and subsequent extensions established the South Los Pinos Fruitland-Pictured Cliffs Pool which allows downhole commingling and production from the Fruitland and Pictured Cliffs Formations. Northeast Blanco Unit Wells No. 202 and 204 are producing commingled from both the Fruitland and Pictured Cliffs Formations.

We submitted an original application on February 9, 1982. Since that time several things have occurred including the designation of the Northeast Blanco Unit Wells No. 201, 202, 204, 205, 206 and 208 as being capable of producing unitized substance in paying quantities. Only one well drilled to date has not been declared to be a commercial producer, and that well, the Northeast Blanco Unit Well No. 203, is completely surrounded by commercial wells.

The Northeast Blanco Unit No. 203 well contains reservoir rocks which contain natural gas in paying quantities and was successfully tested at commercial rates of gas flow. Unfortunately, a fresh water zone also flows into the well bore and is drowning out a portion of the gas flow. We do not believe that this production problem condemns this 160-acre area. The reservoir rocks have been shown to be present and commercial wells offset this location in all directions. We therefore believe that the NW/4 of Section 11 T. 31N, R. 7W should be included in the initial participating area.

In support of this application the following items are included and made a part hereof:

1. Original application for an initial participating area dated February 9, 1982
 - A. Drilling and completion data
 - B. Map showing wells, tracts, and boundaries of proposed initial participating area
 - C. Exhibit B - Revised February 11, 1982
2. Original geological and engineering report
 - A. Log of NEBU Well No. 43-A
 - B. Log of NEBU Well No. 64
 - C. Pressure vs. Production curve for N.W. Pipeline Co. Unit 32-7 Well No. 6-17
 - D. Economic evaluation letter of February 10, 1982
 - E. Economic evaluation of NEBU Well No. 201
 - F. Economic evaluation of NEBU Well No. 202
 - G. Economic evaluation of NEBU Well No. 203
 - H. Economic evaluation of NEBU Well No. 204
 - I. Economic evaluation of NEBU Well No. 205
 - J. Economic evaluation of NEBU Well No. 206
 - K. Economic evaluation of NEBU Well No. 208
 - L. Drilling and Completion - well data sheet
 - M. Isopachous map of Fruitland-Pictured Cliffs zone

- N. Cross Section A-A' - Fruitland Formation
 - O. Cross Section B-B' - Fruitland Formation
 - P. Cross Section C-C' - Fruitland Formation
 - Q. Cross Section A-A' - Pictured Cliffs Formation
 - R. Cross Section B-B' - Pictured Cliffs Formation
 - S. Cross Section C-C' - Pictured Cliffs Formation
3. Additional Supporting Data for the Fruitland-Pictured Cliffs Initial Participating Area Re-Application of February 7, 1983
- A. Letter of February 4, 1983, Re: History & Summary of Northeast Blanco Unit and Application for Approval of Initial Participating Area for the Fruitland & Pictured Cliffs Formation
 - B. Cross Section D-D' - Fruitland and Pictured Cliffs Producing Intervals
 - C. Supplemental Information - Direct Offsets to N.E. Blanco Unit and NEBU No. 206 Well
 - D. Recapitulation of Working Interest Costs and Participation
 - E. Gas Production - Los Pinos/Fruitland-Pictured Cliffs

It is important to note that Tract No. 21-A (the largest tract in the proposed initial participating area) includes $4\frac{1}{2}$ of the 7 wells drilled to date. This means that the owners of Tract 21-A have paid for 4.5/7ths or 64% of the wells drilled to date. It seems fair and equitable that Tract 21-A be included in the initial participating area. Tract 21-A directly offsets the commercial wells, and is shown on Cross Section D-D' to be underlain by producing and capable of producing Fruitland and Pictured Cliffs gas-bearing sandstones.

The proposed initial participating area is predicated upon the knowledge and information first obtained upon the completion of the Northeast Blanco Unit Wells No. 201, 202, 204, 205, 206 and 208. These wells have been declared to be productive of unitized substances in paying quantities under the terms of the unit agreement. Other information on wells producing in paying quantities from the Fruitland and/or Pictured Cliffs Formations is included and further proves the necessity of establishing this participating area. The effective date of this initial participating area shall be December 12, 1979, by terms of the unit agreement.

Consequently, applicant respectfully requests your approval of the hereinabove selection of lands to constitute the initial Fruitland-Pictured Cliffs participating area of the Northeast Blanco Unit, to be effective December 12, 1979. Please indicate your approval in the space provided on the attached sheet and return an approved copy hereof for our file.

Copies of this letter and the schedules are being sent to the working interest owners as shown on the attached sheet.

Dated this February 7, 1983.



Charles F. Blackwood
General Partner

RECAPITULATION

WORKING INTEREST OWNERS

FRUITLAND/PICTURED CLIFFS

| | Royalty ORRI | Participation Gross Production | Working Interest Participation | Paid Prior to Application for Participating Area | Total Expense | % of Expense |
|--------------------------------|-----------------|--------------------------------------|--------------------------------------|---|--------------------|--------------|
| Blackwood & Nichols Co., Ltd. | | .3564541 | .4317013 | 755,163 | 44.1274607 | |
| Devon-Blanco, Ltd. | | .0796007 | .0964041 | 166,025 | 10.3894584 | |
| Amoco Production Company | | .0728222 | .0832254 | 195,726 | 12.2248078 | |
| EI Paso Natural Gas Company | | .0548602 | .0664700 | 0 | 0.0 | |
| The Wiser Oil Company | | .0000091 | .0000104 | 0 | 0.0 | |
| Jacquelyn M. Williams | | .0000049 | .0000056 | 0 | 0.0 | |
| Texaco, Inc. | | .0216785 | .0247755 | 0 | 0.0 | |
| H. H. Phillips | | .0000018 | .0000021 | 0 | 0.0 | |
| H. H. Phillips, Jr. | | .0000001 | .0000002 | 0 | 0.0 | |
| Castle, Inc. | | .0000011 | .0000012 | 0 | 0.0 | |
| Wintergreen | | .0000011 | .0000012 | 0 | 0.0 | |
| Susanna Phillips Kelly | | .0000001 | .0000002 | 0 | 0.0 | |
| Tenneco Oil Company | | .0000269 | .0000306 | 0 | 0.0 | |
| Continental Oil Company | | .0000269 | .0000306 | 0 | 0.0 | |
| Northwest Pipeline Corporation | | .0630275 | .0743893 | 125,560 | 7.8572522 | |
| Westland Oil Development Corp. | | .0564764 | .0679971 | 138,631 | 8.6752056 | |
| Thayer H. Laurie | | .0058691 | .0070664 | 13,817 | 0.8646357 | |
| Thayer H. Laurie and | | | | | | |
| David N. Mills, Trustee | | .0035518 | .0042762 | 8,719 | 0.5456147 | |
| Morris & Burk, Ltd. | | .1192698 | .1436122 | 244,373 | 15.2922940 | |
| Jane Phillips Ladouceur | | .0000001 | .0000002 | 0 | 0.0 | |
| Winnie A. Phillips, Estate | | .0000001 | .0000002 | 0 | 0.0 | |
| | <u>.1663175</u> | <u>.8336825</u> | <u>1.0000000</u> | <u>1,598,014</u> | <u>100.0000000</u> | |

Approved: _____ Date: _____
United States Department of the Interior
Office of the Secretary
Minerals Management Service
Subject to like approval by The Commissioner of Public Lands and
Oil Conservation Division.

Approved: _____ Date: _____
Commissioner of Public Lands
State of New Mexico
Subject to like approval by The United States Geological Survey
and Oil Conservation Division

Approved: _____ Date: _____
Oil Conservation Division
State of New Mexico
Subject to like approval by the United States Geological Survey
and Commissioner of Public Lands

The above approvals are for the Northeast Blanco Unit Agreement No. 1, Section 929,
San Juan and Rio Arriba Counties, New Mexico, initial participating area Fruit-
land-Pictured Cliffs Formations.

RECAPITULATION
WORKING INTEREST OWNERS
FRUITLAND/PICTURED CLIFFS

| | Royalty ORRI | Participation Gross Production | Working Interest Participation |
|---|-----------------|--------------------------------------|--------------------------------------|
| Blackwood & Nichols Co., Ltd. | | .3564541 | .4317013 |
| Devon-Blanco, Ltd. | | .0796007 | .0964041 |
| Amoco Production Company | | .0728222 | .0832254 |
| El Paso Natural Gas Company | | .0548602 | .0664700 |
| The Wiser Oil Company | | .0000091 | .0000104 |
| Jacquelyn M. Williams | | .0000049 | .0000056 |
| Texaco, Inc. | | .0216785 | .0247755 |
| H. H. Phillips | | .0000018 | .0000021 |
| H. H. Phillips, Jr. | | .0000001 | .0000002 |
| Castle, Inc. | | .0000011 | .0000012 |
| Wintergreen | | .0000011 | .0000012 |
| Susanna Phillips Kelly | | .0000001 | .0000002 |
| Tenneco Oil Company | | .0000269 | .0000306 |
| Continental Oil Company | | .0000269 | .0000306 |
| Northwest Pipeline Corporation | | .0630275 | .0743893 |
| Westland Oil Development Corp. | | .0564764 | .0679971 |
| Thayer H. Laurie | | .0058691 | .0070664 |
| Thayer H. Laurie and David N. Mills, Trustee | | .0035518 | .0042762 |
| Morris & Burk, Ltd. | | .1192698 | .1436122 |
| Jane Phillips Ladouceur | | .0000001 | .0000002 |
| Winnie A. Phillips, Estate | | .0000001 | .0000002 |
| | <hr/> | <hr/> | <hr/> |
| | .1663175 | .8336825 | 1.0000000 |

EXHIBIT "B"
REVISED FEBRUARY 11, 1982

SCHEDULE SHOWING THE PERCENTAGE AND KIND OF OWNERSHIP OF OIL AND GAS INTERESTS
IN ALL LANDS IN THE NORTHEAST BLANCO UNIT AGREEMENT
IN THE FRUITLAND & PICTURE CLIFFS FORMATIONS

| TRACT NO. | LEASE NO. AND/OR TYPE OF LAND | DESCRIPTION | PERCENT OF | | WORKING INTEREST OWNER | PERCENT OF | |
|--------------|-------------------------------------|---|------------------------|----------------------------|--|--|------------------------------|
| | | | PARTICIPATING ACRES | PARTICIPATION FOR TRACT | | ROYALTY | PERCENT OF ORRI |
| 19 | NM 03356 FEDERAL | T31N R7W Sec. 14: W $\frac{1}{2}$ W $\frac{1}{2}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 15: ALL | 840 | 17.33002% | 9.95921% | Blackwood & Nichols Co., Ltd. 86.485606% x 81.745283% of 25/32 +81.745283% of 7/256 Subject to excess ORRI to: Agnes M. Morgan 81.745283% of 1/2 of 1/8 of 8/8 of 7/256 Agnes M. Morgan, Trustee 81.745283% of 1/2 of 1/8 of 8/8 of 7/256 | USA 12 $\frac{1}{2}$ % 5% |
| | | | | 2.22402% | Devon-Blanco, Ltd. 86.485606% x 18.254717 of 25/32 +18.254717% of 7/256 Subject to excess ORRI to: Agnes M. Morgan 18.254717% of 1/2 of 1/8 of 8/8 of 7/256 Agnes M. Morgan, Trustee 18.254717% of 1/2 of 1/8 of 8/8 of 7/256 | | |
| | | | | 1.56813% | Westland Oil Development Corporation | 11.582241% of 25/32 | |
| | | | | .16297% | Thayer H. Laurie | 1.203736% of 25/32 | |
| | | | | .09862% | Thayer H. Laurie & David N. Mills, Trustees | .728417% of 25/32 | |
| | | | | 3.31707% | Morris & Burk, Ltd. | 49/256 | |

| TRACT NO. | LEASE NO. AND/OR TYPE OF LAND | DESCRIPTION | PARTICIPATING ACRES | PERCENT OF PARTICIPATION FOR TRACT | PERCENT OF PARTICIPATION | WORKING INTEREST OWNER | PERCENT OF ROYALTY | PERCENT OF ORRI |
|--------------|-------------------------------------|--|------------------------|--|-----------------------------|---|--|--------------------|
| 21-A | NM 03356 FEDERAL | <u>T31N R7W</u> Sec. 1: Lots 6, 7, 8 E $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 10: S $\frac{1}{2}$ Sec. 11: N $\frac{1}{2}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 12: E $\frac{1}{2}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 13: ALL Sec. 14: E $\frac{1}{2}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ | 2396.77 | 49.44771% | 28.41659% | Blackwood & Nichols Co., +81.745283% of 7/256 Ltd. Subject to excess ORRI to: Agnes M. Morgan 81.745283% of 1/2 of 1/8 of 8/8 of 7/256 Agnes M. Morgan, Trustee 81.745283% of 1/2 of 1/8 of 8/8 of 7/256 | USA 12 $\frac{1}{2}$ % | 5% |
| | | | | | 6.34577% | Devon- Blanco, Ltd. +18.254717% of 7/256 Subject to excess ORRI to: Agnes M. Morgan 18.254717% of 1/2 of 1/8 of 8/8 of 7/256 Agnes M. Morgan, Trustee 18.254717% of 1/2 of 1/8 of 8/8 of 7/256 | 86.485606% x 18.254717 of 25/32 +18.254717% of 7/256 | |
| | | | | | 4.47434% | Westland Oil Development Corporation | 11.582241% of 25/32 | |
| | | | | | .46502% | Thayer H. Laurie | 1.203736% of 25/32 | |
| | | | | | .28139% | Thayer H. Laurie & David N. Mills, Trustees | .728417% of 25/32 | |
| | | | | | 9.46460% | Morris & Burk, Ltd. | 49/256 | |

| TRACT NO. | LEASE NO. AND/OR TYPE OF LAND | DESCRIPTION | PARTICIPATING ACRES | PERCENT OF PARTICIPATION FOR TRACT | PERCENT OF PARTICIPATION | WORKING INTEREST OWNER | PERCENT OF | |
|-----------|-------------------------------------|----------------------------------|------------------------|--|-----------------------------|--|----------------------------|--------------------|
| | | | | | | | ROYALTY | PERCENT OF ORRI |
| 23 | FEDERAL | <u>T31N R7W</u> Sec. 1: Lot 5 | 10.31 | .21271% | .05183% | Blackwood & Nichols Co., Ltd. | 29.805862% x 81.745283% | 12½% NONE |
| | | | | | .01157% | Devon-Blanco, Ltd. | 29.805862% x 18.254717% | |
| | | | | | .07014% | Amoco Production Co. | 32.975933% | |
| | | | | | .04509% | El Paso Natural Gas Co. | 21.199416% | |
| | | | | | .00104% | The Wiser Oil Company | .488466% | |
| | | | | | .00056% | Jacquelyn M. Williams | .260911% | |
| | | | | | .00183% | Texaco, Inc. | .861600% | |
| | | | | | .00021% | H.H. Phillips | .096160% | |
| | | | | | .00002% | Jane Phillips Ladouceur | .008792% | |
| | | | | | .00002% | Winnie H. Phillips, Est. | .010990% | |
| | | | | | .00002% | H.H. Phillips, Jr. | .008792% | |
| | | | | | .00012% | Castle, Inc. | .054949% | |
| | | | | | .00012% | Wintergreen Energy Corp. | .057696% | |
| | | | | | .00002% | Susanna Phillips Kelly | .008792% | |
| | | | | | .00306% | Tenneco Oil Company | 1.440596% | |
| | | | | | .00306% | Continental Oil Company | 1.440595% | |
| | | | | | .01178% | Northwest Pipeline Corp. | 5.536260% | |
| | | | | | .01051% | Westland Oil Development Corp. | 4.940999% | |
| | | | | | .00105% | Thayer H. Laurie | .492448% | |
| | | | | | .00066% | Thayer H. Laurie & Associates, Inc. | .310743% | |

| TRACT NO. | LEASE NO. AND/OR TYPE OF LAND | DESCRIPTION | PARTICIPATING ACRES | PERCENT OF PARTICIPATION FOR TRACT | PERCENT OF PARTICIPATION | WORKING INTEREST OWNER | PERCENT OF ROYALTY | PERCENT OF ORRI |
|-----------|-------------------------------|--|---------------------|------------------------------------|--------------------------|---|---------------------|--------------------------------|
| 24 | E 3150-1 STATE | <u>T31N R7W</u> Sec. 16: N $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ | 320 | 6.60191% | 6.60191% | EI Paso Natural Gas Company | A11 | 12 $\frac{1}{2}$ % 5% |
| 25 | E 3707-4 STATE | <u>T31N R7W</u> Sec. 16: SW $\frac{1}{4}$ NE $\frac{1}{4}$ | 40 | .82524% | .82524% | Northwest Pipeline Corporation | A11 | 12 $\frac{1}{2}$ % 5% |
| 26 | E 178-1 STATE | <u>T31N R7W</u> Sec. 16: W $\frac{1}{2}$ W $\frac{1}{2}$ | 160 | 3.30096% | 1.65048% | Amoco Production Co. | 1/2 | 12 $\frac{1}{2}$ % NONE |
| | | | | | .94850% | Blackwood & Nichols Co., Ltd. 86.485606 x 81.745283% of 25/64 +81.745283% of 7/512 Subject to excess ORRI to: Agnes M. Morgan 81.745283% of 1/2 of 1/8 of 8/8 of 7/512 Agnes M. Morgan, Trustee 81.745283% of 1/2 of 1/8 of 8/8 of 7/512 | | |
| | | | | | .21181% | Devon-Blanco, Ltd. 86.485606 x 18.254717% of 25/64 +18.254717% of 7/512 Subject to excess ORRI to: Agnes M. Morgan 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 Agnes M. Morgan, Trustee 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 | | |
| | | | | | .14935% | Westland Oil Development Corporation | 11.582241% of 25/64 | |
| | | | | | .01552 | Thayer H. Laurie | 1.203736% of 25/64 | |

| TRACT NO. | LEASE NO. AND/OR TYPE OF LAND | DESCRIPTION | PARTICIPATING ACRES | PERCENT OF PARTICIPATION FOR TRACT | PERCENT OF PARTICIPATION | WORKING INTEREST OWNER | PERCENT OF ROYALTY | PERCENT OF ORRI |
|-----------|-------------------------------------|--|------------------------|--|-----------------------------|---|-----------------------|--------------------|
| 27 | E 5382 | <u>T31N R7W</u> Sec. 16: SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | 120 | 2.47572% | 2.47572% | Thayer H. Laurie .728417% of 25/64 & David N. Mills, Trustees Morris & Burk, Ltd. 49/512 Texaco, Inc. A11 | 12 $\frac{1}{2}$ % | NONE |
| 46 | PATENTED LANDS | <u>T31N R7W</u> Sec. 11: SE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 12: W $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 14: NE $\frac{1}{4}$ NW $\frac{1}{4}$ | 320 | 6.60191% | 6.60191% | Northwest Pipeline Corp. A11 Subject to ORRI as to Oil and payments out of gas payable to Phillips Petroleum Company as set out in certain Sublease and Operating Agreement executed between said parties under date of February 23, 1955, and to T.H. McElvain as set out in that certain Sublease and Operating Agreement executed between said parties under date of September 1, 1955 | | |
| 47 | PATENTED LANDS | <u>T31N R7W</u> Sec. 1: SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 12: N $\frac{1}{2}$ NW $\frac{1}{4}$ | 320 | 6.60191% | 3.30096% 1.89700% | Amoco Production Co. 1/2 Blackwood & 86.485606% x Nichols Co., 81.745283% of 25/64 +81.745283% of 7/512 Subject to excess ORRI to: Agnes M. Morgan 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 Agnes M. Morgan, Trustee 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 | | |

| TRACT NO. | LEASE NO. AND/OR TYPE OF LAND | DESCRIPTION | PARTICIPATING ACRES | PERCENT OF PARTICIPATION FOR TRACT | PERCENT OF PARTICIPATION | WORKING INTEREST OWNER | PERCENT OF ROYALTY | PERCENT OF ORRI |
|--------------|-------------------------------------|-------------------------------|------------------------|--|-----------------------------|--|-----------------------|--------------------|
| | | .42362% | | | | Devon- 86.485606% x Blanco, 18.254717% of 25/64 Ltd. +18.254717% of 7/512 Subject to excess ORRI to: Agnes M. Morgan 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 Agnes M. Morgan, Trustee 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 | | |
| | | .29869% | | | | Westland Oil 11.582241% of 25/64 Development Corporation | | |
| | | .03104% | | | | Thayer H. 1.203736% of 25/64 Laurie | | |
| | | .01878% | | | | Thayer H. .728417% of 25/64 Laurie and David N. Mills, Trustees | | |
| | | .63182% | | | | Morris & Burk, 49/512 Ltd. | | |
| 48 | PATENTED LANDS | <u>T31N R7W</u> Sec. 9: S1 | 320 | 6.60191% | 3.30096% | Amoco Production Co. 1/2 | 12½% | NONE |
| | | | | | 1.89700% | Blackwood & 86.485606% x Nichols Co., 81.745283% of 25/64 Ltd. +81.745283% of 7/512 Subject to excess ORRI to: Agnes M. Morgan 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 Agnes M. Morgan, Trustee 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 | | |

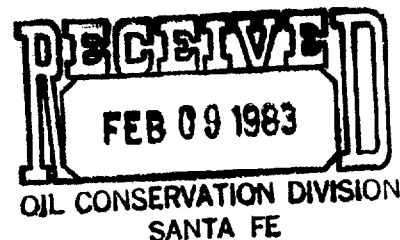
| LEASE NO. TRACT AND/OR NO. | TYPE OF LAND | DESCRIPTION | PARTICIPATING ACRES | PERCENT OF PARTICIPATION FOR TRACT | PERCENT OF PARTICIPATION | WORKING INTEREST OWNER | PERCENT OF ROYALTY | PERCENT OF ORRI |
|-------------------------------------|--------------|----------------------------|------------------------|--|-----------------------------|--|-----------------------|--------------------|
| | | | | | .42362% | Devon- Blanco, Ltd. 86.485606% x 18.254717% of 25/64 +18.254717% of 7/512 Subject to excess ORRI to: Agnes M. Morgan 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 Agnes M. Morgan, Trustee 18.254717% of 1/2 of 1/8 of 8/8 of 7/512 | | |
| | | | | | .29869% | Westland Oil Development Corporation 11.582241% of 25/64 | | |
| | | | | | .03104% | Thayer H. Laurie 1.203736% of 25/64 | | |
| | | | | | .01878% | Thayer H. Laurie & David N. Mills, Trustees .728417% of 25/64 | | |
| | | | | | .63182% | Morris & Burk, Ltd. 49/512 | | |
| R E C A P I T U L A T I O N | | | | | | | | |
| LAND | ACRES | PERCENTAGE OF UNIT AREA | | | | | | |
| Federal | 3,247.08 | 66.99044% | | | | | | |
| State | 640.00 | 13.20383% | | | | | | |
| Patented | 960.00 | 19.80573% | | | | | | |
| Total Unit Area | 4,847.08 | 100.00000% | | | | | | |

BLACKWOOD & NICHOLS CO., LTD.

1310 FIRST NATIONAL CENTER WEST
OKLAHOMA CITY, OKLAHOMA 73102

405 235.8505

February 4, 1983



United States Department of the Interior
Office of the Secretary
Minerals Management Service
South Central Region
P.O. Box 26124
Albuquerque, New Mexico 87125

State of New Mexico
Commissioner of Public Lands
Attention: Mr. Ray D. Graham
P.O. Box 1148
Santa Fe, New Mexico 87501

State of New Mexico
Oil Conservation Commission
Attention: Mr. Joe Ramey
P.O. Box 2088
Santa Fe, New Mexico 87501

All Working Interest Owners
Proposed Initial Participating Area
Fruitland & Pictured Cliffs Formations
Northeast Blanco Unit
San Juan County, New Mexico

RE: History & Summary of
Northeast Blanco Unit and
Application for Approval
of Initial Participating
Area for the Fruitland &
Pictured Cliffs Formations

Gentlemen:

Blackwood & Nichols Co., Ltd., on February 9, 1982, made application for an initial participating area to be formed in the northern part of the Northeast Blanco Unit. That application has not been approved to date. We are re-applying as of this date, as Operator of the Northeast Blanco Unit.

The purpose of this letter is to familiarize you with the history of the Northeast Blanco Unit, the original application for a Fruitland-Pictured Cliffs participating area, and the evidence submitted to prove that the area requested represents "the area known or reasonably estimated to be producing in paying quantities".

Paragraph 11 of the Northeast Blanco Unit Agreement which governs applications for initial participating areas follows:

11. PARTICIPATION AFTER DISCOVERY: Upon completion of a well capable of producing unitized substances in paying quantities, or as soon thereafter as required by the Supervisor and Commissioner, the Unit Operator shall submit for approval by the Director, the Commissioner, and the Commission, a schedule based on subdivisions of the public-land survey or aliquot parts thereof, of all unitized land then regarded as reasonable proved to be productive or unitized substances in paying quantities; all land in said schedule on approval of the Director, the Commissioner, and the Commission to constitute a participating area, effective as of the date of first production. Said schedule also shall set forth the percentage of unitized substances to be allocated as herein provided to each unitized tract in the participating area so established, and shall govern the allocation of production from and after the date the participating area becomes effective.

A separate participating area shall be established in like manner for each separate pool or deposit of unitized substances or for any group thereof produced as a single pool or zone, and any two or more participating areas so established may be combined into one with the consent of the owners of all working interests in the lands within the participating areas so to be combined, and approval of the Director, the Commissioner, and the Commission. The participating area or areas so established shall be revised from time to time, subject to like approval, whenever such action appears proper as a result of further drilling operations or otherwise, to include additional land then regarded as reasonably proved to be productive in paying quantities and the percentage of allocation shall also be revised accordingly. The effective date of any revision shall be the first of the month in which is obtained the knowledge or information on which such revision is predicated, unless a more appropriate effective date is specified in the schedule. No land shall be excluded from a participating area on account of depletion of the unitized substances.

It is the intent of this section that a participating area shall represent the area known or reasonably estimated to be productive in paying quantities; but, regardless of any revision of the participating area, nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the participating area.

In the absence of agreement at any time between the Unit Operator and the Director, the Commissioner, and the Commission as to the proper definition or re-definition of a participating area, or until a participating area has, or areas have, been established as provided herein, the portion of all payments affected thereby may be impounded in a manner mutually acceptable to the owners of working interests, except royalties due the United States and the State of New Mexico, which shall be determined by the Supervisor and the Commissioner and the amount thereof deposited as directed by the Supervisor and

the Commissioner, respectively, to be held as unearned money until a participating area is finally approved and then applied as earned or returned in accordance with a determination of the sum due as Federal and State Poyalty on the basis of such approved participating area.

Whenever it is determined, subject to the approval of the Supervisor, as to wells on Federal land, the Commissioner as to wells on State land, and the Commission as to patented land, that a well drilled under this agreement is not capable of production in paying quantities and inclusion of the land on which it is situated in a participating area is unwarranted, production from such well shall be allocated to the land on which the well is located so long as that well is not within a participating area established for the pool or deposit from which such production is obtained.

The statement which says, "It is the intent of the section that a participating area shall represent the area known or reasonably estimated to be productive in paying quantities" is in our interpretation the most important part of Paragraph 11.

On August 8, 1952 Blackwood & Nichols Company applied for an initial participating area for the Northeast Blanco Mesaverde of 12,146.03 acres. This application was supported by a geological and engineering report which gave detailed completion information on five wells located within the proposed initial participating area for the Mesaverde and one offset well. The application was received August 11, 1952 by the U.S.G.S. in Roswell and on October 10, 1952 by the Conservation Division of the Geological Survey. The application was approved on November 24, 1952.

Blackwood & Nichols Company applied for the first enlargement of the N.E. Blanco Mesaverde unit in 1954. This enlarged area was based on two additional wells completed in the Mesaverde formation within the unit area: the N.E.B.U. Well No. 2-20 and the N.E.B.U. Well No. 11-25. A third well, the N.E.B.U. Well No. 1-27, had a successful drill stem test from the Mesaverde. Several other Mesaverde wells outside the proposed area of enlargement were mentioned in the geological and engineering memoranda. This enlargement increased the size of the Northeast Blanco Unit Mesaverde Participating Area from 12,146.03 acres to 25,943.08 acres. The first enlargement contained 13,797.05 acres. The application was made in June 1954 and approval was granted August 30, 1954.

The second enlargement of the N.E. Blanco Mesaverde Participating Area was based on one new Mesaverde well, the N.E.B.U. Well No. 33-12 located in the SW/4 of Sec. 12, T.31N, R.7W, San Juan Co., New Mexico. The application for the second enlargement of the N.E.B.U. Mesaverde Participating Area was filed on March 5, 1957. This application received final approval on October 10, 1957 and increased the size of the N.E.B.U. Mesaverde Participating Area by 817.91 acres to 26,760.99 acres. Some acreage was not committed.

The third enlargement to the N.E.B.U. Mesaverde Participating Area was filed for on January 20, 1958. This enlargement was based on one well, the N.E.B.U. No. 52-15 located in the NE/4 of Sec. 15, T.31N,

R.7W, San Juan Co., New Mexico. An additional 960 acres, the S/2 of Sec. 10 and all of Sec. 15, T.31N, R.7W were added to the participating area at that time, making the total area 27,720.99 acres. The final approval was granted on May 29, 1958.

The fourth enlargement of the N.E.B.U. Mesaverde Participating Area was applied for January 15, 1960. One new well was the basis for this expansion, the N.E.B.U. Well No. 43-11 located in the SW/4 of Sec. 11, T.31N, R.7W, San Juan Co., New Mexico. Because of this one well, the participating area was enlarged to include 29,229.01 acres. The acreage added was 1,508.02 acres. The final approval for this enlargement was granted on May 20, 1960.

The fifth enlargement of the Northeast Blanco Unit was applied for on February 28, 1961. One additional well, the N.E.B.U. No. 58-13, was drilled in the expansion area. The N.E.B.U. No. 58-13, located in the NE/4 of Sec. 13, T.31N, R.7W, had an initial potential of 6,270 Mcf pd. The additional area added because of the 58-13 well includes Section 1, the E/2 of Sec. 12, the E/2 of Sec. 13, all in T.31N-R.7W, and Sections 6, 7, 18 and 20 of T.31N, R.6W. This made the participating area total 32,507.98 acres. The fifth enlargement contained approximately 3,278.97 acres, and was the result of one additional well.

In 1976 a 10.31-acre tract #23 was purchased by Blackwood & Nichols Co., Ltd. for the N.E. Blanco Unit. This 10.31-acre tract was committed to the participating area in the same proportion as the previously operating rights of each working interest owner in the N.E. Blanco Unit Mesaverde Participating Area. The net result was that each working interest owner retained the same interest after the transition as he had previously held. The size of the participating area did not change, only the number of acres committed to the participating area.

One can summarize the history of the N.E. Blanco Unit Mesaverde Participating Area as follows:

- A. Initial Participating Area approved November 24, 1952
Containing 12,146.03 acres - Based on five wells.
- B. First Enlargement approved August 30, 1954
Containing 13,797.05 acres - Based on two wells and a successful drill stem test
- C. Second Enlargement approved October 10, 1957
Containing 817.91 acres - Based on one well
- D. Fourth Enlargement approved May 20, 1960
Containing 1,508.02 acres - Based on one well
- E. Fifth Enlargement approved on August 1, 1961
Containing 3,278.97 acres - Based on one well
- F. Sixth Enlargement - A 10.31-acre tract was purchased and committed to the unit. The area was already included in the participating area.

An area of over 32,500 acres has been committed and approved of as the Northeast Blanco Unit Mesaverde Participating Area in five applications. Two of these applications included areas greater than 12,000 acres, and the average size of each area approved is over 6,000 acres. The total number of new successful Mesaverde wells used to justify

these applications was ten wells. Over 3,000 acres per well were declared to be "reasonably proved to be productive of unitized substances in paying quantities".

Our initial application of February 9, 1982 for an initial participating area of 4,874.08 acres was supported by evidence of seven wells, six of which have now been declared commercial producers. The seventh well had initial tests of high gas flows but encountered production problems after it started selling gas. The logs show that gas is present at this location in paying quantities and the location is completely surrounded by commercial wells producing from the Fruitland-Pictured Cliffs interval. We believe that this location can be reasonably estimated to be "productive in paying quantities".

One well, the NEBU #206, was reworked during 1982 and was only recently declared to be a commercial well by the Minerals Management Service. The NEBU #205 was also determined to be a commercial well late in 1982.

The approval of the 4,874.08-acre participating area will enable us to proceed with the development of the Fruitland-Pictured Cliffs reserves in a cooperative manner.

Our 1982 Plan of Development included 8 Fruitland-Pictured Cliffs development wells. These wells were not drilled, however, because the requested participating area was not approved by the Minerals Management Service.

Operators of individual tracts were not interested in drilling in this area of tight reservoirs when they knew that they were taking all the risk, paying all the costs, and then if successful, having to give up most of the well to non-participants.

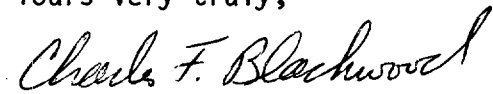
Sharing the costs, risks, and rewards among all the owners within the requested participating area was the plan of the Northeast Blanco Unit Advisory Committee, and eight wells were included in the 1982 Plan of Development. The 4,874.08-acre initial participating area is reasonable and equitable on the basis of costs and risk to date for the working interest owners. The production for the entire recommended initial participating area will pay out all the working interest owners within the area. The percentage of costs to date and the percentage of the initial participating area which would be allocated are shown in a table attached hereto.

The working interest owners in Tract 21-A of the Northeast Blanco Unit drilled and paid for all of four wells and half of the fifth well. It is fair and equitable that all of Tract 21-A be included within the initial participating area. It also means that the percentage of initial cost is very nearly the same as initial ownership will be when the 4,874.08-acre initial participating area is approved.

This area represents not only the "area known or reasonably estimated to be productive of paying quantities", but also the area most equitable to most of the parties concerned.

It is hoped that this will help to explain the re-application for an initial participating area for the Fruitland-Pictured Cliffs Formations. If you have any questions, we will be glad to try and answer them.

Yours very truly,

A handwritten signature in cursive script that reads "Charles F. Blackwood". The signature is written in dark ink and is positioned above the printed name.

Charles F. Blackwood

NORTHEAST BLANCO UNIT-FRUITLAND-PICTURED CLIFFS

Drilling and Completion Data

Table No. 1

| N.E.B.U. Well No. | Location | Elevation | Drilling Commenced | Well Completed | Production Casing | Perforation | Stimulation Produce | Fruitland Top | Pictured Cliffs Top | Initial Flow Mcfpd | Initial SIP |
|----------------------|---|--------------------|-----------------------|-------------------|----------------------------|---|--|------------------|---------------------------|------------------------------------|----------------|
| 201 | 990 FSL, 1030 1030 FWL Sec 9 T 31N, R 7W | 6652 GL 6665 KB | 6-30-79 | 7-24-79 | 3750 | 344-59 3560-3640 | 27090 gals gelled wtr 1,200,000 cu ft N2 140,000# 10- 20 Sd | 3255 | 3567 | 1508 | 1550 |
| 201 Reworked | Same as above | 6652 GL 6665 KB | 6-30-79 | 7-25-80 | Cement Retainer 3536 | 3482-94 | Versagel Fractured 30,350 gals wtr & 30,000# 10-20 sd | 3255 | 3567 | 37 (most recent deliv. test) | 1152 |
| 202 | 1070 FNL, 1760 FEL, Sec 11 T31N, R 7W | 6445 GL 6457 KB | 8-2-79 | 8-7-79 | 3595 | 3372, 82, 92 3306, 18, 3402, 12, 20, 28, 40, 46, 52, 74 | 48000 gals gelled wtr 80,000# 10-20 Sd | 3081 | 3364 | 5033 | 850 |
| 203 | 990 FNL, 1490 FWL Sec 11 T31N, R 7W | 6546 GL 6559 KB | 7-28-79 | 8-14-79 | 3670 | 3456-3588 (P.C.) 3368-92 Fruitland | 20,200 gals gelled wtr 926,000 cu ft N2 100,000 # 10-20 Sd | 3157 | 3436 | 2250 | 1290 |

Table No. 1 Continued

| N.E.B.U. Well No. | Location | Elevation | Drilling Commenced | Well Completed | Production Casing | Perforation | Stimulation Produce | Fruitland Top | Pictured Cliffs Top | Initial Flow Mcfpd | Initial SIP |
|----------------------|--|---------------------|-----------------------|-------------------|-----------------------------|----------------------------|---|------------------|---------------------------|------------------------------------|----------------|
| 203 Reworked | Same as above | 6546 GL 6559 KB | 7-28-79 | 7-17-80 | Cement Retainer @3409 | 3368-92 | Cleaned up interval with supply gas | 3157 | 3436 | 18 | 1162 |
| 204 | 830 FSL,990FWL Sec 1, T. 31N, R-7W | 6546 GL. 6559 KB | 8-9-79 | 8-22-79 | 3686 | 3404-98 3518 to 3598 | 48,078 gals gelled wtr 75,000# 10-20 sand | 3165 | 3475 | 4476 | 1420 |
| 205 | 1180 FSL,925FEL Sec 10,T31N, R7W | 6560 GL 6572 KB | 7-22-79 | 8-7-79 | 3660 | 3464 to 3586 | 62,394 Gals foam 100,000# 10-20 Sd | 3148 | 3450 | 1014 | 1410 |
| 205 Reworked | Same as above | 6560 GL 6572 KB | | 7-20-80 | Cement Retainer @3430 | 3350-62 | Versagel Fractured 300 gals 15 % Hcl.28,640 gals wtr. 30,000# 10-20 Sd. | 3148 | 3450 | 55 (most recent deliv. test) | 1012 |
| 206 | 790 FSL,1190 FWL,Sec 10 T31N, R7W | 6625 GL 6637 KB | 3-19-81 | 6-8-81 | 3690 | 3518 to 3549 | 49,980 gals gelled wtr, and 84,968# 10-20 sand | 3207 | 3506 | 890 | 1340 |
| 208 | 790 FSL,1750 FWL,Sec 12 T31N R7W | 6541 GL 6554 KB | 4-2-81 | 6-5-81 | 3674 | 3477 to 3570 | 52,329 gals gelled wtr, and 75,000 lbs. 20-40 sand | 3015 | 3425 | 3425 | 1440 |



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

January 20, 1983

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

BLACKWOOD & NICHOLS CO., LTD.
First National Center West
Oklahoma City, OK 73102

ATTENTION: Charles F. Blackwood

RE: Northeast Blanco Unit
San Juan & Rio Arriba Counties,
New Mexico

Dear Mr. Blackwood:

Enclosed please find the approved copies of the material referenced above.
Such approval is contingent upon like approval by the Commissioner of Public
Lands and the U. S. Minerals Management Service.

Sincerely,

A handwritten signature in cursive script that reads "Roy E. Johnson".

Roy E. Johnson
Petroleum Geologist

REJ/dp

Enc.

cc: Commissioner of Public Lands - Santa Fe
Minerals Management Service - Albuquerque
OCD District Office - Aztec

State of New Mexico



JIM BACA
COMMISSIONER



Commissioner of Public Lands

January 6, 1983

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

Blackwood & Nichols Co., Ltd.
1310 First National Center West
Oklahoma City, Oklahoma 73102

#318

Re: 1983 Plan of Development
Northeast Blanco Unit
San Juan and Rio Arriba Counties
New Mexico

ATTENTION: Mr. Charles F. Blackwood

Gentlemen:

The Commissioner of Public Lands has this date approved your 1983 Plan of Development for the Northeast Blanco Unit, San Juan and Rio Arriba Counties New Mexico. Such plan proposes to drill a Fruitland-Pictured Cliffs exploratory well No. 217 in the NE/4 of Section 27, Township 31 North, Range 7 West and a Fruitland-Pictured Cliffs well No. 218 to meet offset obligations in the NW/4 of Section 16, Township 31 North, Range 7 West, San Juan County, New Mexico. Our approval is subject to like approval by the United States Minerals Management Service and the New Mexico Oil Conservation Division.

Enclosed is an approved copy for your files.

Please remit a Three (\$3.00) Dollar filing fee.

Very truly yours,

JIM BACA
COMMISSIONER OF PUBLIC LANDS

BY:
RAY D. GRAHAM, Director
Oil and Gas Division
AC 505/827-5744

JB/RDG/pm
encls.

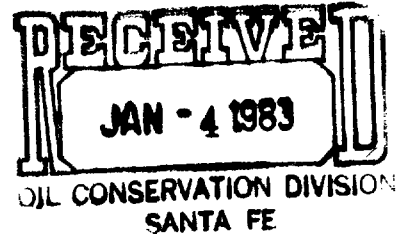
cc: OCD-Santa Fe, New Mexico
 USMMS-Albuquerque, New Mexico
 Administration

BLACKWOOD & NICHOLS CO., LTD.

NEW ADDRESS:

1310 FIRST NATIONAL CENTER WEST
OKLAHOMA CITY, OKLAHOMA 73102

405 235-8505



December 29, 1982

United States Department of the Interior
Office of the Secretary
Minerals Management Service
South Central Region
P.O. Box 26124
Albuquerque, New Mexico 87125

*File
Case #318*

Commissioner of Public Lands
State of New Mexico
P.O. Box 1148
Santa Fe, New Mexico 87501

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P.O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

RE: Northeast Blanco Unit
No. 1, Sec. 929
San Juan and Rio Arriba Cos.
New Mexico

Gentlemen:

Blackwood & Nichols Co., Ltd., as Unit Operator, on behalf of itself and all owners of oil and gas leases within the Northeast Blanco Unit, hereby submits a Plan of Development for the calendar year 1983.

The total number of wells within the Northeast Blanco Unit are as follows:

| | |
|-----------------------------------|-----|
| Mesaverde (Producing) | 125 |
| Mesaverde (Plugged and Abandoned) | 11 |
| Dakota-Mesaverde (Dual) | 4 |
| Dakota | 1 |
| Fruitland-Pictured Cliffs | 7 |

Total Mesaverde Cumulative Production through October 31, 1982 - 267,539,878 MCF.

Total Dakota Cumulative Production through October 31, 1982 - 5,151,536 MCF.

Total Fruitland-Pictured Cliffs Cumulative Production through October 31, 1982 - 376,778 MCF.

Total Condensate Cumulative Production through October 31, 1982 - 81,259.78 Barrels.

Unit Operator proposes to drill a Fruitland-Pictured Cliffs exploratory well in:
TOWNSHIP 31 NORTH, RANGE 7 WEST, SAN JUAN COUNTY, NEW MEXICO

NORTHEAST BLANCO UNIT NO. 217
1650' F/NL - 1650' F/EL
SECTION 27 - T31N - R7W

Unit Operator proposes to drill a Fruitland-Pictured Cliffs well to meet offset obligations in:

TOWNSHIP 31 NORTH, RANGE 7 WEST, SAN JUAN COUNTY, NEW MEXICO

NEBU No. 218 NW/4, Section 16

Due to Supply and Demand, Unit Operator does not anticipate drilling any Dakota or Mesaverde Formation wells in 1983.

All ten Mesaverde wells from our 1982 Plan of Development have been completed, and as of this date, six have made first delivery into Northwest Pipeline Corporation's system; four are awaiting pipeline connections.

The initial Participating Area and drilling of eight additional Fruitland-Pictured Cliffs wells, as proposed in our 1982 Plan of Development, was not approved; consequently, the wells were not drilled. The proposed Fruitland-Pictured Cliffs well, located in the NE/4 of Section 27, Township 31 North, Range 7 West, San Juan County, New Mexico, has been approved and will be drilled early in 1983.

Pursuant to Section 17 of the Northeast Blanco Unit Agreement, we believe all offset obligations have been, or will be met during 1983. Unit Operator will drill any other wells subsequently deemed necessary or desired by Unit Operator and the Working Interest Owners.

All acreage within the Northeast Blanco Unit boundaries is now participating in the Mesaverde Formation. Unit Operator is now in the process of forming an Initial Participating Area for the Fruitland-Pictured Cliffs Formation.

If this plan is acceptable, please signify your approval as required under Section 10 of the Unit Agreement, in the space provided on the attached form and return two approved copies to Blackwood & Nichols Co., Ltd.

The effective date of the Plan of Development shall be January 1, 1983.

Very truly yours,

BLACKWOOD & NICHOLS CO., LTD.

By Charles F. Blackwood
Charles F. Blackwood, General Partner

DL:st

Four copies to each addressee

Approved: _____ Date: _____

United States Department of the Interior
Office of the Secretary
Minerals Management Service
South Central Region
P. O. Box 26124
Albuquerque, New Mexico 87125

Subject to like approval by the Commissioner of Public Lands and
Oil Conservation Division.

Approved: _____ Date: _____

Commissioner of Public Lands
State of New Mexico
P. O. Box 1148
Santa Fe, New Mexico 87501

Subject to like approval by the Minerals Management Service and
the Oil Conservation Division.

Approved: _____



Date: 1-20-83

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Subject to like approval by the Minerals Management Service and
Commissioner of Public Lands.

The above approvals are for the Northeast Blanco Unit Agreement No. 1, Section 929,
San Juan and Rio Arriba Counties, New Mexico,
1983 Plan of Development.



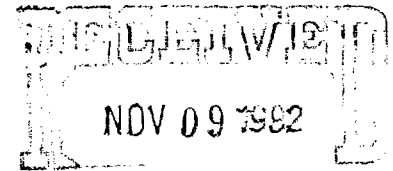
IN REPLY
REFER TO:

United States Department of the Interior

MINERALS MANAGEMENT SERVICE
SOUTH CENTRAL REGION
505 MARQUETTE AVENUE, N.W., SUITE 815
ALBUQUERQUE, NEW MEXICO 87102

NOV 03 1982

Blackwood and Nichols Co., LTD
Attention: Mr. Charles F. Blackwood
2013 First National Center West
Oklahoma City, Oklahoma 73102



Gentlemen:

Your application for the Initial Fruitland-Pictured Cliffs Participating Area and Economic Evaluation for the seven wells within the proposed participating area, Northeast Blanco Unit, I-Sec No. 929, San Juan and Rio Arriba Counties, New Mexico, were received on February 18, 1982.

The application proposes that all of sections 1, 11, 12, 13, 14, 15, and 16 the south half of sections 9 and 10, T. 31 N., R. 7 W., N.M.P.M., constitute the initial participating area for the Fruitland-Pictured Cliffs Formation. This proposed initial participating area is predicated upon the knowledge and information obtained upon completion of wells Nos. 201, 202, 203, 204, 205, 206, and 208.

After examining the data that was submitted and reviewing production histories for these wells, we concur that wells Nos. 201, 202, 204, and 208 are capable of producing unitized substances in paying quantities. Due to low and declining production rates, wells Nos. 203, 205, and 206 are not considered as being capable of producing unitized substances in paying quantities at this time. If reworking or redrilling operations are performed on these wells which make them capable of producing unitized substances in paying quantities, they could be included at a later date.

Based on when the wells were completed, inclusion of only those wells that are determined to be capable of producing in paying quantities, and in accordance with the terms of the Northeast Blanco Unit Agreement, we recommend the following participating area:

1. Fruitland-Pictured Cliffs "A" Participating Area, comprising the SW $\frac{1}{4}$ of section 9 and the NW $\frac{1}{4}$ of section 16, T. 31 N., R. 7 W., effective as of the date of first production of well No. 201.
2. Fruitland-Pictured Cliffs "B" Participating Area, comprising the W $\frac{1}{2}$ of section 1 and the NE $\frac{1}{4}$ of section 11, T. 31 N., R. 7 W., effective August 1, 1979.
3. First Revision to the Fruitland-Pictured Cliffs "B" Participating area, comprising the W $\frac{1}{2}$ of section 12, T. 31 N., R. 7 W., effective June 1, 1981.

We are returning, unapproved, your application so that it may be revised and resubmitted as requested above.

Sincerely yours,

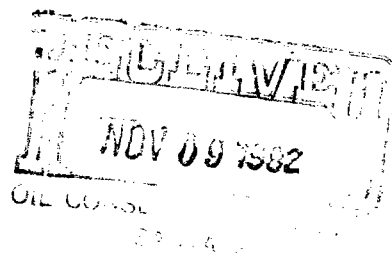
(ORIG. SGD.) SUE E. UMSHLER

FOR Gene F. Daniel
Deputy Minerals Manager
Oil and Gas

Enclosures

cc:

Commissioner of Public Lands, Santa Fe
N.M.O.C.D., Santa Fe





PETROLEUM PRODUCTS

JUN 22 1982

PRODUCING DEPARTMENT
WEST UNITED STATES
DENVER DIVISION

June 16, 1982

TEXACO
U.S.A.
A DIVISION OF TEXACO INC.
P. O. BOX 2100
DENVER, COLORADO 80201

INITIAL PARTICIPATING AREA FOR
FRUITLAND AND PICTURED CLIFFS FORMATIONS
NORTHEAST BLANCO UNIT #1 - Sec. No. 929
SAN JUAN & RIO ARriba COUNTIES, NEW MEXICO

United States Department of the Interior
Office of the Secretary
Minerals Management Service
South Central Region
P. O. Box 21664
Albuquerque, NM 87125

318

State of New Mexico
Oil Conservation Commission
P. O. Box 2088
Santa Fe, NM 87501
Attn. Mr. Joe Ramey

State of New Mexico
Oil Conservation Commission
P. O. Box 2088
Santa Fe, NM 87501
Attn. Mr. Ray D. Graham

Gentlemen:

Reference is made to the application dated February 9, 1982 from Blackwood & Nichols Company, Ltd. concerning the above subject. Texaco objects to such application on the grounds that the proposed initial participating area includes lands not yet reasonably proven to be productive in paying quantities. It is therefore not in conformance with the applicable provisions of the Unit Agreement.

In essence, Texaco supports the position of Amoco Production Company in this matter as outlined in its letter to you of March 31, 1982 regarding this subject.

Very truly yours

B. J. Willard
Asst. Drilling & Production Mgr.

BJW:bbg

cc: Blackwood & Nichols Co. Ltd.
2013 First National Center West
Oklahoma City, Oklahoma 73102
Attn. Mr. Charles F. Blackwood

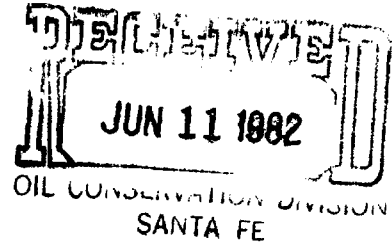
Amoco Production Co. USA
Amoco Building
17th & Broadway
Denver, CO 80202
Attn. Mr. R. Gile

BLACKWOOD & NICHOLS Co., LTD.

P. O. BOX 1237

DURANGO, COLORADO 81301-1237

(303) 247-0728



June 8, 1982

United States Department of the Interior
Office of the Secretary
Minerals Management Service
South Central Region
P. O. Box 26124
Albuquerque, New Mexico 87125

State of New Mexico
Commissioner of Public Lands
Attention: Mr. Ray D. Graham
P. O. Box 1148
Santa Fe, New Mexico 87501

State of New Mexico
Oil Conservation Commission
Attention: Mr. Joe Ramey
P. O. Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

Re: SUPPLEMENTAL INFORMATION TO BE
ATTACHED TO AND INCLUDED WITH OUR
APPLICATION FOR AN INITIAL PARTIC-
IPATING AREA IN THE FRUITLAND AND
PICTURED CLIFFS FORMATION WITHIN THE
NORTHEAST BLANCO UNIT DATED
FEBRUARY 11, 1982

Since our original application was submitted, the Northeast Blanco Unit Well No. 206 has been recompleted in the Fruitland zone. The upper Pictured Cliffs zone was squeeze cemented, the lower zone perforated, foam fractured, and after testing was determined to be non-productive. The well was subsequently completed in the Fruitland zone. Copies of daily reports, Sundry Notices and Completion reports are enclosed.

The recompletion of Northeast Blanco Unit Well No. 206, we believe as a commercial well, completes a line of successful wells from East to West across the entire area included in the application for an initial participating area for the Fruitland-Pictured Cliffs formations.

Northwest Pipeline Corporation has recently completed their Rosa Unit #88 Dual Pictured Cliffs-Mesaverde well, Lease #SF-078765, located 1610' F/NL - 1100' F/WL - Section 8, Township 31 North, Range 6 West, San Juan County, New Mexico, which is a direct offset to the Northeast Blanco Unit.

We sincerely hope the supplemental information will aid you in a timely approval of our application.

Please advise should added information be needed or any questions should arise concerning this matter.

Very truly yours,

BLACKWOOD & NICHOLS CO., LTD.



DeLasso Loos, District Manager

DL:ew

Encs.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

JUN 11 1982

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ gas ☒ other

2. NAME OF OPERATOR

Blackwood & Nichols Co., Ltd.

3. ADDRESS OF OPERATOR

P. O. Box 1237, Durango, Colorado 81301

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 790' F/SL - 1190' F/WL

AT TOP PROD. INTERVAL: Same

AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) Recomplete

☐

☐

☐

☐

☐

☐

☐

☐

X

5. LEASE

NM 03358

6. INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME NEBU Agreement

No. 1, Sec. 929

8. FARM OR LEASE NAME

Northeast Blanco Unit

9. WELL NO.

206

10. FIELD OR WILDCAT NAME

South Los Pinos - Fruitland PC

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

M-10-31N-7W

12. COUNTY OR PARISH

San Juan

13. STATE

New Mexico

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)

6625' GL

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

5-17-82 4 1/2" cement retainer on 2 3/8" tubing set at 3423'. Squeezed cemented perforations at 3518', 3529', 3537', and 3549' with 150 sacks Class B cement. Final squeeze pressure 1800 PSI.

5-18-82 3647' PBTD. Drilled cement retainer at 3423' and cement to 3549'. Cleaned out to 3647', tested 4 1/2" casing to 1500 PSI for 30 minutes, held ok. Perforated 4 holes/foot/interval; 3572', 3580', 3584', 3608' (16 holes).

5-19-82 Went in hole with straddle packer on 2 3/8" tubing, broke down perforations at 3608' with 2650 PSI. 3580' - 3584' with 2175 PSI and 3572' with 2240 PSI. Set Baker Model H-15-D production packer on wire line at 3556'.

5-20-82 Foam fractured with 50,000 gals. 20# gel water 793,500 cu. feet nitrogen and 40,000# 20-40 sand. Maximum treating pressure 4250 PSI.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft. (over)

18. I hereby certify that the foregoing is true and correct

SIGNED DeLasso Loos TITLE District Manager DATE June 8, 1982

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

(continued)

average treating pressure 3900 PSI, average injection rate 10 bbls./min. 15 min. Shutin pressure 2150 PSI.

5-21-82 Very little gas.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY OIL CONSERVATION
SANTA FE

JUN 11 1982

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☒ other ☐
2. NAME OF OPERATOR
Blackwood & Nichols Co., Ltd.
3. ADDRESS OF OPERATOR
P. O. Box 1237, Durango, Colorado 81301
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 790' F/SL - 1190' F/WL
AT TOP PROD. INTERVAL: Same
AT TOTAL DEPTH: Same
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

- TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐
(other) ☐

SUBSEQUENT REPORT OF:

- ☐
☐
☐
☐
☐
☐
☒
☐

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

5-22-82 Set bridge plug at 3505'. Tested 4 1/2" casing to 2500 PSI, held ok. Perforated 2 holes at 3462'. Could not pump into formation at 1800 PSI. Set bridge plug at 3450'. Tested 4 1/2" casing to 2500 PSI, held ok. Perforated 4 holes/foot/interval: 3414', 3422', 3432'. Broke formation down through perfs. 2150 PSI to 1500 PSI. Sand-water gel fractured with total fluid 37,500 gals. 30 lb. gel and 45,000 lbs. 20-40 sand. Speer headed 500 gals. 7 1/2% Hcl. ahead. 5,000 gals. Pad 2% Kcl (Potassium chloride). 10,000 gals. 30# gel with 1# sand/gal. 10,000 gals 30# gel with 1 1/2# sand/gal., 10,000 gals. 30# gel with 2# sand/gal. 2,500 gals. water flush, Instant shutin 1520 PSI. Maximum treating pressure 2440 PSI, average treating pressure 2000 PSI, average injection rate 18 bbls./min.

5-24-82 3647' PBTD. Reran 113 jts. 2 3/8" 4.7# EUE tubing 3392', landed at (over) Subsurface Safety Valve: Manu. and Type Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED DeLasso Loos TITLE District Manager DATE June 8, 1982

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

(continued)

3410'. 6' perforated jt.-one jt. up. Seating nipple at 3374'.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

| | | | |
|--|-----------------|--|--|
| 1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> Other _____ | | 5. LEASE DESIGNATION AND SERIAL NO. NM 03358 | |
| b. TYPE OF COMPLETION: NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input checked="" type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> Other _____ | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME NEBU Agreement | |
| 2. NAME OF OPERATOR Blackwood & Nichols Co., Ltd. | | 7. UNIT AGREEMENT NAME No. 1, Sec. 929 | |
| 3. ADDRESS OF OPERATOR P. O. Box 1237, Durango, Colorado 81301 | | 8. FARM OR LEASE NAME Northeast Blanco Unit | |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 790' F/SL - 1190' F/WL At top prod. interval reported below Same At total depth Same | | 9. WELL NO. 206 | |
| 14. PERMIT NO. _____ DATE ISSUED _____ | | 10. FIELD AND POOL, OR WILDCAT South Los Pinos - Fruitland | |
| 15. DATE SPUDDED 3-19-81 | | 11. SEC., T., R., M., OR BLOCK AND SURVEY PC OR AREA M-10-31N-7W | |
| 16. DATE T.D. REACHED 3-25-81 | | 12. COUNTY OR PARISH San Juan | |
| 17. DATE COMPL. (Ready to prod.) Recompleted 5-31-82 | | 13. STATE New Mexico | |
| 18. ELEVATIONS (DF, REB, RT, GR, ETC.)* 6625' GL | | 19. ELEV. CASINGHEAD 6622' | |
| 20. TOTAL DEPTH, MD & TVD 3704' | | 21. PLUG, BACK T.D., MD & TVD 3647' | |
| 22. IF MULTIPLE COMPL., HOW MANY* → | | 23. INTERVALS DRILLED BY → | |
| 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 3414' - 3432' Fruitland Formation | | 25. WAS DIRECTIONAL SURVEY MADE No | |
| 26. TYPE ELECTRIC AND OTHER LOGS RUN None | | 27. WAS WELL CORED No | |
| 28. CASING RECORD (Report all strings set in well) | | | |
| CASING SIZE | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE |
| 9 5/8" | 36.00# H-40 | 208' | 12 1/4" |
| 4 1/2" | 10.50# K-55 | 3690' | 7 5/8" |
| 29. LINER RECORD | | | |
| SIZE | TOP (MD) | BOTTOM (MD) | SACKS CEMENT* |
| | | | |
| 30. TUBING RECORD | | | |
| SIZE | DEPTH SET (MD) | PACKER SET (MD) | |
| 2 3/8" | 3410' | ---- | |
| 31. PERFORATION RECORD (Interval, size and number) 3414' - 3422' - 3432' - 12 holes | | | |
| 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. | | | |
| DEPTH INTERVAL (MD) | | AMOUNT AND KIND OF MATERIAL USED | |
| 3414' - 3432' | | 37,500 gals. 30# gel water | |
| | | 45,000# 20-40 sand | |
| 33.* PRODUCTION | | | |
| DATE FIRST PRODUCTION | | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | |
| | | WELL STATUS (Producing or shut-in) Shut-in | |
| DATE OF TEST | HOURS TESTED | CHOKE SIZE | PROD'N. FOR TEST PERIOD |
| 5-31-82 | 3 hrs. | 3/4" | → |
| FLOW. TUBING PRESS. | CASING PRESSURE | CALCULATED 24-HOUR RATE | OIL—BBL. GAS—MCF. WATER—BBL. GAS-OIL RATIO |
| 120 PSI | 525 PSI | → | Q=1632 mcf/d. |
| 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) | | | |
| TEST WITNESSED BY | | | |
| 35. LIST OF ATTACHMENTS | | | |
| 36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records | | | |
| SIGNED <u>DeLasso Loos</u> | | TITLE <u>District Manager</u> | |
| | | DATE <u>June 8, 1982</u> | |

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

| 37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES | | | | 38. GEOLOGIC MARKERS | |
|---|------|--------|-----------------------------|----------------------|---|
| FORMATION | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC. | NAME | <div>TOP</div> <div>MEAS. DEPTH</div> <div>TRUE VERT. DEPTH</div> |
| San Jose | 0 | 1250 | | | |
| Animas | 1250 | 2230 | | | |
| Ojo Alamo | 2230 | 2415 | | | |
| Kirtland | 2415 | 3250 | | | |
| Fruitland | 3250 | 3505 | | | |
| Pictured Cliffs | 3505 | 3640 | | | |
| Lewis | 3640 | --- | | | |

BLACKWOOD & NICHOLS CO., LTD.

P. O. BOX 1237

DURANGO, COLORADO 81301-1237

(303) 247-0728

Drilling Report--Pictured Cliffs (Workover)

Northeast Blanco Unit Well No. 206

LOCATION: 790' F/SL - 1190' F/WL

Sec. M-10-31N-7W

San Juan County, New Mexico

Elevation: 6625' GL

- 5-18-82 WOC. Moved Dwinell Brother's Rig on location and rigged up. Pulled 119 jts. 2 3/8" tubing. Went in hole with 4 1/2" cement retainer on 2 3/8" tubing set at 3423'. Squeezed cemented perforations at 3518', 3529', 3537', and 3549' with 150 sacks Class B cement. Final squeeze pressure 1800 PSI. Job completed at 5:00 p.m. 5-17-82.
- 5-19-82 3647' PBTD. Drilled cement retainer at 3423' and cement to 3549'. Cleaned out to 3647', tested 4 1/2" casing to 1500 PSI for 30 minutes, held ok. Perforated 4 holes/foot/interval; 3572', 3580', 3584', 3608' (16 holes).
- 5-19-82 3647' PBTD. Went in hole with straddle packer on 2 3/8" tubing, broke down perforations at 3608' with 2650 PSI. 3580' 3584' with 2175 PSI and 3572' with 2240 PSI. Set Baker Model H-15-D production packer on wire line at 3556'. Went in hole with 2 3/8" tubing and seal assembly. 118 jts. 2 3/8" 4.7# EUE tubing 3547' plus 2.0' sub one joint down, 3549', landed at 3556'.
- 5-20-82 3647' PBTD. Nippled up well head. Foam fractured with 50,000 gals. 20# gel water 793,500 cu. feet nitrogen and 40,000# 20-40 sand. Maximum treating pressure 4250 PSI, average treating pressure 3900 PSI, average injection rate 10 bbls./min. 15 min. Shutin pressure 2150 PSI. Pump time 2 hrs. 2 minutes & 30 seconds. Job completed 7:00 p.m. 5-19-82. Well now cleaning up.
- 5-21-82 3647' PBTD. Well cleaning up. Very little gas.
- 5-22-82 3647' PBTD. Unseated packer at 3556'. Came out of hole with seal assembly. Set bridge plug at 3505'. Tested 4 1/2" casing to 2500 PSI, held ok. Perforated 2 holes at 3462'. Could not pump into formation at 1800 PSI. Set bridge plug at 3450'. Tested 4 1/2" casing to 2500 PSI, held ok. Perforated 4 holes/foot/interval: 3414', 3422', 3432'. Broke formation down through perfs. 2150 PSI to 1500 PSI. Sand-water gel fractured with total fluid 37,500 gals. 30 lb. gel and 45,000 lbs. 20-40 sand. Speer headed 500 gals 7 1/2% Hcl. ahead. 5,000 gals. Pad 2% Kcl (Potassium chloride). 10,000 gals. 30# gel with 1# sand/gal. 10,000 gals. 30# gel with 1 1/2#

BLACKWOOD & NICHOLS CO., LTD.

P. O. BOX 1237

DURANGO, COLORADO 81301-1237

(303) 247-0728

Drilling Report - Pictured Cliffs Well No. 206 (Workover) continued

sand/gal., 10,000 gals. 30# gel with 2# sand/gal. 2,500 gals. water flush. Instant shutin 1520 PSI. Maximum treating pressure 2440 PSI, average treating pressure 2000 PSI, average injection rate 18 bbls./min. Now cleaning out at 1500' with gas.

5-23-82 3647' PBTD. Cleaned out to bridge plug at 3450'.

5-24-82 3647' PBTD. Cleaned out to 3450'. Reran 113 jts. 2 3/8" 4.7# EUE tubing 3392', landed at 3410'. 6' perforated jt.-one jt. up. Seating nipple at 3374'. Released rig 12:00 midnight 5-23-82.