

Midland Division
Exploration Production

Conoco Inc. 10 Desta Drive, Suite 100W Midland, TX 79705-4500 (915) 686-5400

October 8, 1993

State of New Mexico
Energy & Minerals Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

Application to Downhole Commingle the Mesaverde and Pictured Cliffs Gas Producing Zones in the AXI Apache N No. 11, 790' FSL & 990' FEL, Unit P Sec. 12, T-25N, R-4W, Rio Arriba County, New Mexico

Gentlemen:

It is proposed to downhole commingle the Mesaverde and Pictured Cliffs gas zones in this well to maintain economic operation and to maximize the efficient and effective recovery of gas at this location. Economic evaluation of the continued operation of this well as a dual completion has shown that it can only be economically maintained if it can be downhole commingled and operated as a single completion.

The Mesaverde and Pictured Cliffs producing rates have declined to marginal levels of 15 MCFGPD and 15 MCFGPD respectively. Elimination of excess operational equipment and operating expense associated with dual operation would contribute to the maximization of the producing lives and recoveries from each pool. Downhole commingling would permit the elimination of one tubing string, one separator and one tank now required for the operation of this dual completion and would eliminate maintenance costs of maintaining isolation of the two completions.

The following attachments are submitted in support of this application:

- 1. EXHIBIT A is a plat (a) showing all Pictured Cliffs wells on the lease, (b) identifying the subject well, and (c) outlining the current Pictured Cliffs proration unit.
- 2. EXHIBIT B is a plat (a) showing all Mesaverde wells on the lease, (b) identifying the subject well, and (c) outlining the current Mesaverde proration unit.
- 3. EXHIBIT C is a GOR test form (C-116) with the most recent tests for each completion.
- 4. EXHIBIT D and E are current decline curves for Pictured Cliffs and Mesaverde.
- 5. EXHIBIT F is a plot of shut-in tubing pressures for both zones.
- 6. WI, RI, and ORRI ownerships are identical for both formations.
- 7. EXHIBITS G & H are Pictured Cliffs and Mesawerde gas analyses.

8. Allocation percentages based on the C-116 tests included in this application are suggested as follows:

| | Oil | Gas | Water |
|-------------------------------|------|-----|-------|
| Blanco Pictured Cliffs, South | 0% | 50% | 0% |
| Blanco Mesaverde | 100% | 50% | 100% |

9. Copies of this application were sent by certified mail to each offset operator and to the Jicarilla Agency, who hold the minerals interest on this lease, as identified on EXHIBIT I.

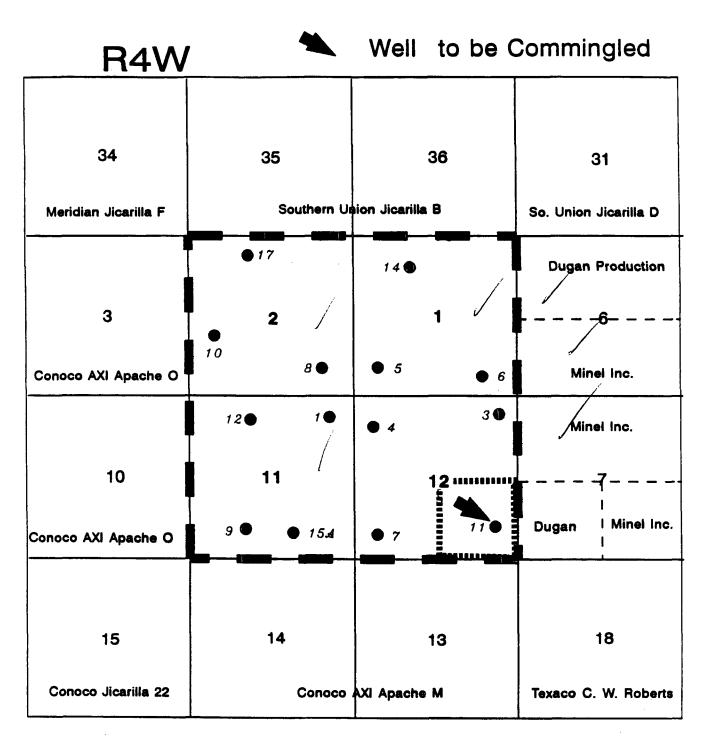
Very truly yours,

Jerry W. Hoover

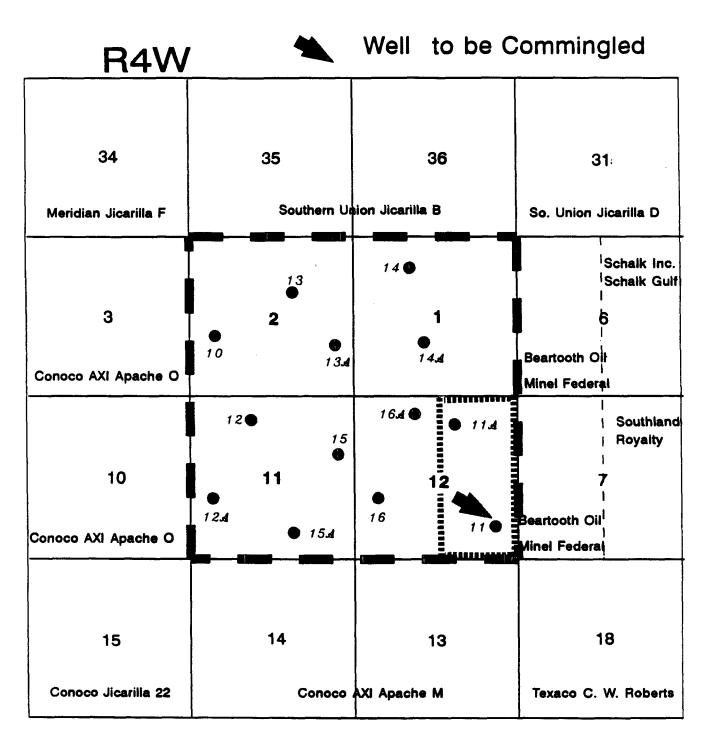
Sr. Conservation Coordinator

T25N

AXI Apache N Lease Pictured Cliffs Wells



AXI Apache N Lease Mesaverde Wells



Revised 1/1/89 Form C-116

Energy, Minerals and Natural Resources Department State of New Mexico

OIL CONSERVATION DIVISION

Santa Fe, New Mexico 87504-2088 P.O. Box 2088

1000 Rio Brizzos Rd., Azzec, NM 87410

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

Submit 2 copies to Appropriate

District Office.

DISTRICT 1

CAS. OH. RATIO TEST

| Operator | | | | | | | Pag. | Blar | Blanco Mesaverde | saver | | | 0 | County | Oio Arribo | 4 | |
|-----------------------------------|----------------------|------|------|----------|-----|----|------------------------|----------------------|------------------|------------------|----------|------------------|----------------|-------------------------------|------------|------------|-------------|
| Conoco Inc. | | | | | ı | | Blanco Pictured Clitts | Pic | ctured | CLIT | ts South | th | - | | ¥ 02 ¥ | IDA | |
| Address Drive, S | Suite 100W, Midland, | 100 | W, N | fid18 | | ΤX | 79705 | TYPEOF TEST - (X) | P & | Scheduled | | 0 | Completion | | • | Special XX | R |
| | | WELL | | LOCATION | HOL | | DATEOF | | CHOICE | 20 | DARLY | | Æ | | NO TEST | 970 | 048-0E |
| LEASE NAME | | 5 | כ | • | - | Œ | TEST | ATB | | PRESS. | ABLE | | MANEH BBLS. | 3 | 32 | 10 E | CU.FT/BBL |
| AXI Apache N | | 11 | م | 12 | 25N | M4 | 5/5/93 | 8 |]] | I I | | 24 | 0 | ţ I | 0 | 15 | ! |
| (Mesaverde) | | | | | | | | | | | | | | | | | |
| AXI Apache N (Pictured Cliffs) | fs) | 11 | ۵ | 12 | 25N | 4W | 5/5/93 | m | ! | l . | | 24 | 1 | ı | | 15 | 1 |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | , | | | | | : | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | <u>_</u> | 1 hereby certify | raity the | that the above information is | ove infe | ormation | is true and |

actions:

haring gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in I well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in that well can be assigned increased allowables when authorized by the Division. **EXHIBIT**

has volumes must be reported in MCF measured at a pressure base of 15.025 paia and a temperature of 60° F. teport casing pressure in lieu of tubing pressure for any well producing through cusing. fic gravity base will be 0.60.

Telephone No.

(915) 686-6548

Oct. 7, 1993 Sr/ Conserva

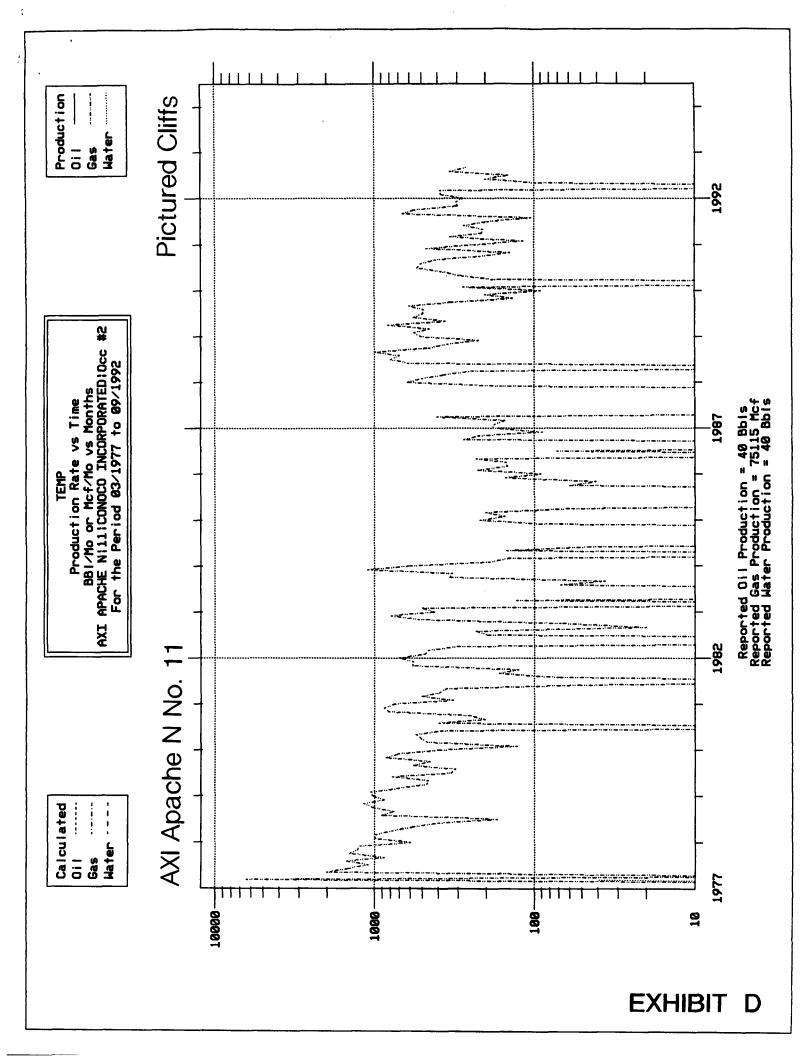
Date

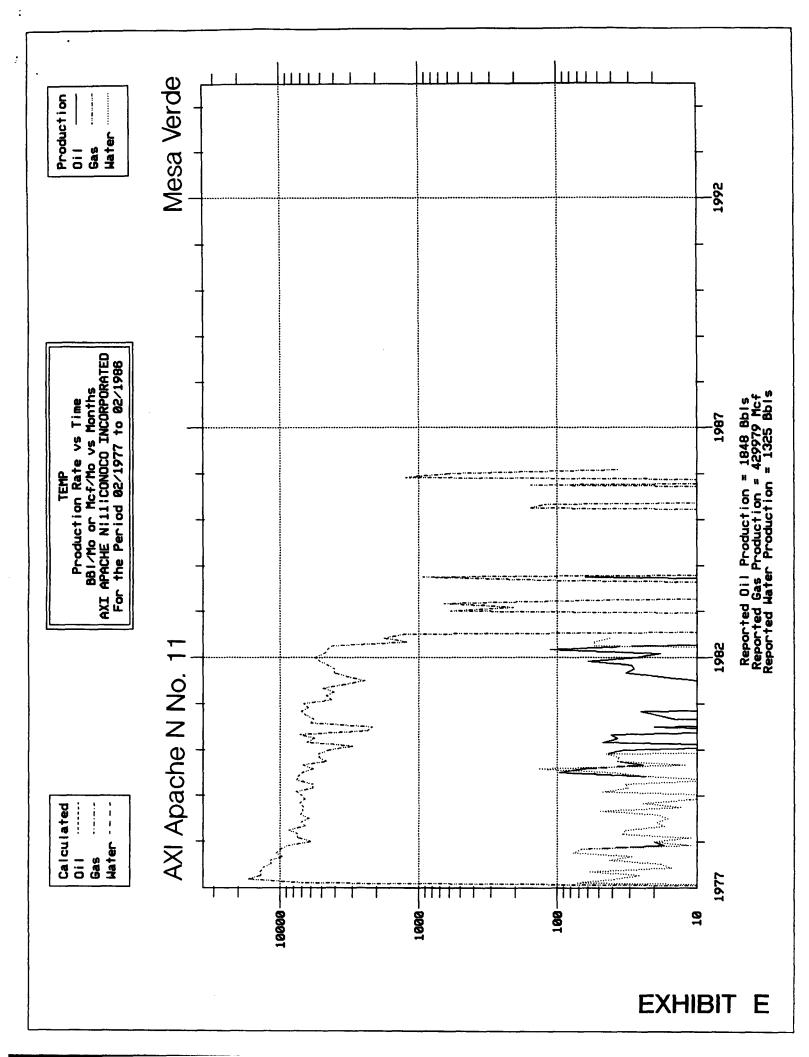
Conservation Coordinator

Jerry W. Hoover

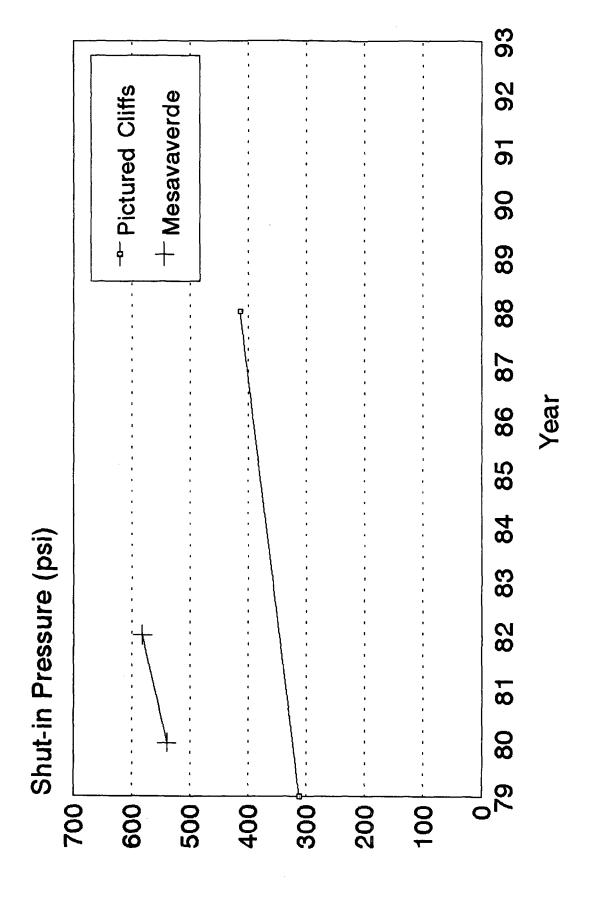
complete to the best of my knowledge, and belief.

: Rule 301, Rule 1116 & appropriate pool rules.)





AXI Apache N #11 Shut-in Pressures



PICTURED CLIFFS

GAS COMPANY OF NEW MEXICO REPORT OF BTU TEST RESULTS

TO:

CONOCO, INC.

REF:

AXI APACHE N

2807

NORTHWEST NEW MEXICO

DATE OF THIS TEST: 11/26/92

DATE OF LAST TEST: 4/22/92

TEST FREQUENCY:

NOT SPECIFIED

RESULTS: SPECIFIC GRAVITY:

0. 6883

BTU/CF @ 14.73/60F/DRY:

1204. 6

| | MOL % | G. P. M. |
|----------------|------------------------|----------------|
| CARBON DIOXIDE | 0. 190 | 0. 0000 |
| NITROCEN | 0. 820 | 0. 0000 |
| METHANE | 85 . 960 | 0. 0000 |
| ETHANE | 6. 620 | 1. 7650 |
| PROPANE | 3. 240 | 0. 8920 |
| ISOBUTANE | 0. 600 | 0. 1950 |
| N-BUTANE | 0. 710 | 0. 2230 |
| ISOPENTANE | 0. 270 | 0.0980 |
| N-PENTANE | 0. 200 | 0. 0730 |
| HEXANE + | 1. 400 | 0. 5700 |
| | | ~~~~ |
| TOTAL | 100. 010 | 3. 8160 |

MESAVERDE

GAS COMPANY OF NEW MEXICO REPORT OF BTU TEST RESULTS

TO: CONOCO, INC.

REF: AXI APACHE N 12

3256

NORTHWEST NEW MEXICO

DATE OF THIS TEST: 11/26/92 DATE OF LAST TEST: 5/25/92

TEST FREQUENCY: NOT SPECIFIED

RESULTS: SPECIFIC GRAVITY: 0.7518 BTU/CF @ 14.73/60F/DRY: 1296.6

> MOL % G. P. M. CARBON DIOXIDE 0. 510 0.0000 NITROCEN 0. 780 0.0000 78.760 0.0000 METHANE 10.890 2.9060 ETHANE 4. 560 1.2530 PROPANE 0.780 0. 2540 **ISOBUTANE** N-BUTANE 1.090 0.3410 ISOPENTANE 0.390 0.1240 0.270 N-PENTANE 0.0980 0.8050 HEXANE + 1. 970 100.000 TOTAL 5. 7810

AXI APACHE "N" LEASE

OFFSET OPERATORS & MINERALS OWNER

Beartooth Oil & Gas P.O. Box 2585 Billings, MT 59103

Dugan Production P.O. Box 420 Farmington, NM 87499

Meridian Oil Inc. P.O. Box 4289 Farmington, NM 87499-4289

Minel Incorporated 309 Washington S.E. Albuquerque, NM 87108 Southern Union Exploration Co. 324 Highway U.S. 64 Farmington, NM 87401

Southland Royalty Company c/o Meridian Oil Inc. P.O. Box 4289 Farmington, NM 87499-4289

Texaco Inc. Western E&P Region P.O. Box 2100

Jicarilla Agency P.O. Box 167 Dulce, NM 87528



STATE OF NEW MEXICO

STATE OF NEW MEXICO OIL CONSERVE TON DIVISION ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION '93 OCT 21 AM 9 08

1000 RIQ BRAZOS ROAD AZTEC, NEW MEXICO 87410 (505) 334-6178

| Date: 10-19-93 Uther Stone |
|---|
| Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87504-2088 |
| RE: Proposed MC Proposed DHC Proposed NSL Proposed SWD Proposed WFX Proposed PMX Proposed NSP Proposed DD |
| Gentlemen: |
| I have examined the application received on 10-12-93 |
| for the CONOCO AXI APACHE Nº #// OPERATOR LEASE & WELL NO. |
| $\frac{p-12-25N-04W}{UL-S-T-R}$ and my recommendations are as follows: |
| APPROVE |
| |
| |
| |
| |
| Yours truly, |
| Zenie Busch |