

## STATE OF NEW MEXICO

# ENERGY AND MINERALS DEPARTMENTY OIL CONSERVATION DIVISION AZTEC DISTRICT OFFICE

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

| O I L<br>BOX | CONSERVATION DIVISION   |   |        |             |
|--------------|---|---|--------|-------------|
|              | A FE NEW MEXICO 87501   |   |        | •           |
| DATE         | Da. 18, 1987  |   |        |             |
| RE:          | Proposed MC Proposed DHC  Proposed NSL Proposed SWD Proposed WFX Proposed PMX |   |        |             |
|              | lemen:  | on dated $\mathcal{D}_{ec}$ $\mathcal{B}$ | 1987   |             |
|              |   | States Com #2-<br>Lease and Wel           |        | 76N-6W      |
|              | Operator  | Lease and Wel                             | Il No. | Unit, S-T-R |
| and          | my recommendations are as   | follows:                                  |        |             |
|              | <del>1</del> )  |   |        |             |
|              | e prove   |   |        |             |
|              |   |   |        |             |
|              |   | ·   |        |             |
|              |   |   |        |             |
| Your         | s truly,  |   |        | ·           |
| -            | The Company   |   |        |             |

## CAULKINS OIL COMPANY

# P. O. BOX 780 FARMINGTON, NEW MEXICO 87401

December 3, 1982

Division Derétor New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, New Mexico

Re: Downhole Commingle
Otero Chacra-Blanco Mesa Verde
State B Comm Well No. 233-E
1715 F/W 1740 F/S Section 16 26N 6W
Rio Arriba County, New Mexico

#### Gentlemen:

As per instructions order No. R-6882 Rule#303-C, we hereby request administrative approval for downhole commingling of Chacra and Mesa Verde Zones in above described well.

In support of this request we submit the following: Rule 303-C "B"

Zones are not econonically producable to complete as singles, no cross flow should occur unless well is shut in for an extended period, no condensate production expected from Chacra, the ownership of this well common, including working interest and royalty interest, bottomhole pressure as measured by BHP gauge 1003# for Chacra and 1138# for Mesa Verde, calculated to common depth of 3907'.

A plat showing acreage dedication attached.

A copy of BHP tests attached.

Well completion history:

TD 7520'

5 1/2" 15.5 and 17# cemented Td to surface in three stages.

6-26-27-82 Dakota zone perforated 7266' to 7424', then sand water fraced with 2080 bbls. water and 131,570# 20-40 sand.

Set BP at 5441', then perforated Mesa Verde zone 5164' to 5376' with 11 holes. Fractured Mesa Verde Perforations with 100,000# 20-40 sand and 1584 bbls. water. Set BP at 3976', then perforated Chacra zone with 11 holes 3860' to 3953'. Fractured Chacra perforations with 60,000# 20-40 sand and 1622 bbls. water.

6-28-82 Pulled BP's at 3976' and 5164'.

6-30-82 Ran 2 3/8" EUE Tubing to 7400', swabbed well in to clean up.



6-30-82 to 8-25-82 Flowed well intermittently with all three zones open, to clean up frac sand and frac water.

Ran Baker Model "D" Production Packer and set at 5405. Production Packer had expendable Plug installed to shut off Dakota Zone.

Ran 2 1/16" OD 3.25# IJ Tubing with Baker Model "R" Double Grip Packer set at 5350' for Mesa Verde test.

Ran 2 1/16" 3.25# IJ Tubing to 3900' for Chacra test.

Bottomhole pressure tests run on both zones. Results attached. Open flow tests run both zones: Mesa Verde rate of flow, after 3 hours, thru 3/4" choke 849 MCFPD Chacra rate of flow, after 3 hours, thru 3/4" choke 1062 MCFPD From results of above test we recommend production split to be:

Chacra zone 56% all gas. Mesa Verde 44% of all gas and 100% of all oil.

After tests completed Model "R" Packer salvaged and completion tubing run as follows:

2 1/16" IJ 3.25# tubing to 7400' with seals set in Packer at 5405' for Dakota production.

1 1/4" IJ 2.3# tubing to 5320' for commingled Chacra-Mesa Verde production.

Caulkins Oil Company is operator of all offset acreage.

Yours very truly,

Charles E. Verquer Superintendent

New Mexico Oil Conservation Division, Aztec (1) Copy: Denver Office (1)

File (1)



MIDLAND, TEXAS / FARMINGTON, NEW MEXICO GRAND JUNCTION, COLORADO

P. O. Box 5247 Midland, Texas 79704 (915) 682-5574

August 31, 1982

Caulkins Oil Company Box 340 Bloomfield, New Mexico 87413

Attention: Mr. Charles Verquer

Subject: Bottom Hole Pressure Measurements

State "B" Comm. No. 233-E

Basin Dakota Field

Chacra and Mesa Verde Formations Rio Arriba County, New Mexico

Our File No. 2-14239-P

### Gentlemen:

Attached hereto are the results of bottom hole pressure measurements which were conducted on the above captioned well August 26, 1982.

The data presented are in tabular and graphical form.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please call us at any time.

Respectfully submitted,

TEFTELLER, INC.

G. W. Taylor Operations Manager

GWT/1w





Page 1 of 2 File 2-14239-P

|       | C                   | CAHLKINS  | OIL COMPA   | midland,<br>NY  | TEXAS<br>_ Lease | STATE "B" COM.            | Well No233-E                            |
|-------|---------------------|---|---|---|------------------|---------------------------|---|
|       | Company             |   |   |   |                  | 400101                    | State NEW MEXICO                        |
|       | Field               |   | AIX (7.17)  |   | _Test Date       | AUCUST 26 1002            |   |
| _     | Formation           |   |   |   | _ rest bale      |                           |   |
|       | Status of Well      | Shut-in   | 19.25 hour  | S   | <u> </u>         |                           |   |
|       | DEPTH               | PRESSURE  | GRADIENT  |   | ++++             |                           | <del></del>                             |
| 1500- | Feet                | Psig  | Psi/Ft.   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
|       | 0                   | 892   |   |   |                  |                           |   |
|       | 1500                | 935   | 0.029   |   |                  |                           |   |
|       | 3000                | 977   | 0.028   |   |                  |                           |   |
|       | 3400                | 988   | 0.028   |   |                  |                           |   |
| 1400- |                     | 994   | 0.030   |   |                  |                           |   |
|       | 3800                | 1000  | 0.030   |   |                  |                           |   |
|       |                     | (3000)  | 0 000   |   |                  |                           |   |
|       | 3907*               | (1003)  | 0.030   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
|       | *Mid-Per            | Ť   |   |   |                  |                           |   |
| 1300- | Datum Pressu        | re  | Psig  |   |                  |                           |   |
|       |                     |   |   | <del>▎</del><br><del>▎</del>  |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
| 1200  |                     |   | <del>-                                     </del> | <del>                                     </del>  |                  |                           |   |
| 1200  |                     |   |   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
|       | <b>}</b>            |   |   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           | +++++++++++++++++++++++++++++++++++++++ |
|       |                     |   |   |   |                  |                           |   |
| 1100  |                     |   |   |   |                  |                           |   |
| 1100  | <del></del>         | <del>                                     </del>  |   |   |                  |                           |   |
|       |                     |   |   | $\blacksquare \blacksquare $ |                  | <del>┦┤</del> ┼┼┼╂┼┼┼┼┼┼┼ |   |
|       |                     |   |   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
| 1000  | <b>*</b>            |   |   | <del>                                     </del>  |                  |                           |   |
|       |                     |   |   |   |                  |                           | +++++++++++++                           |
|       |                     |   |   |   |                  |                           |   |
|       |                     |   |   |   |                  |                           |   |
|       | ┠┼┼┼┼╂┼┼┼           | 111111  |   |   |                  |                           |   |
| 001   |                     |   |   | H + H + H + H   | +++++            |                           |   |
| 906   |                     |   |   |   |                  | Elev. 6669 Do             | atum 13 KB Ft.                          |
|       |                     |   |   | <b>!</b>  | <u> </u>         | Total Depth 7518 Pe       | erf. 3860-3953 Ft.                      |
|       | ┡ <del>┤</del> ┼┼┼┼ |   |   |   |                  | Tubing 2 1/16 in          | , to 3900 Ft.                           |
|       |                     |   |   | $\{i_1,i_2,i_3\}$   |                  | Casing 5 1/2 in           | to 7518 Ft.                             |
|       |                     |   |   |   |                  | Casina Press. 887 Tu      | ubing Press. 893                        |
| 900   |                     |   |   | <u> </u>  |                  | Oil Level None W          | 'ater Level None                        |
| 806   |                     | ╫╫┼┼┼   | ┝╅╁╁╂┼┼┼  | <del>                                      </del>   |                  | Temperature 112 °F        | : 🙃 3800 Ft 📗                           |
|       |                     |   |   |   | +                | Element No. 50665 Ro      | ange 0-4000                             |
|       |                     |   |   |   |                  | Last Test Date            |   |
|       |                     |   |   |   | *****            | Pressure Last Test Date   | Psig                                    |
|       | <u> </u>            | <del>                                      </del> |   |   |                  | B.H.P. Change Ps          | si                                      |
| 70    |                     | · • • • • • • • • • • • • • • • • • • •           |   |   |                  |                           |   |
| , 0   |                     | 1000  | 2000  | 3000  | 40               | 00 5000                   | 6000 <b>700</b> 0                       |



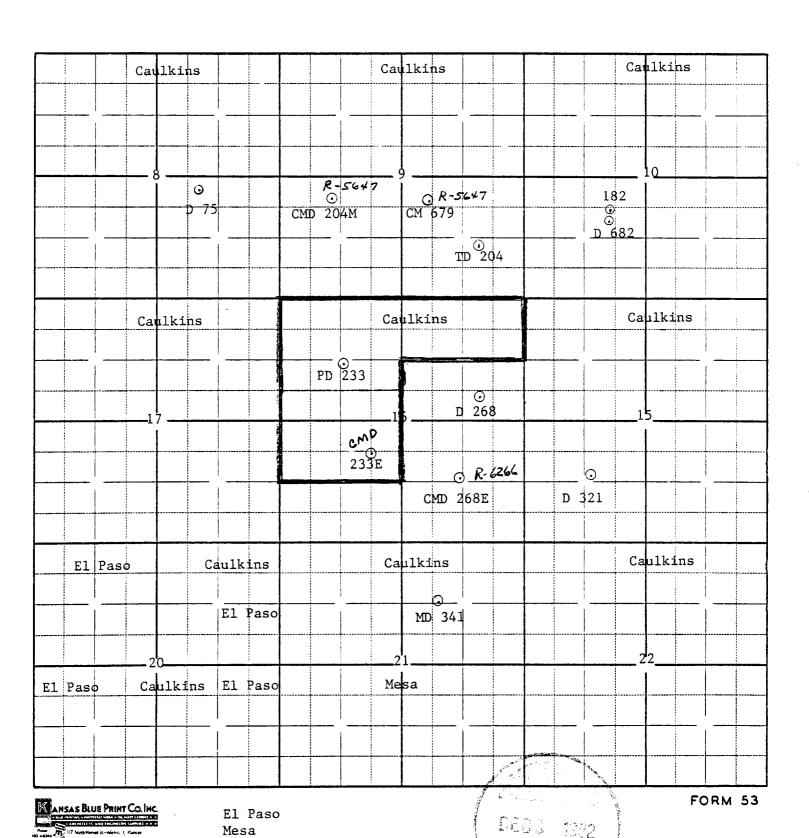
Page 2 of 2 File 2-14239-P

STATE "B" COM. Well No. 233-E CAULKINS OIL COMPANY Company \_ RIO ARRIBA \_\_\_\_\_ State NEW\_MEXICO BASIN DAKOTA \_\_ County \_ Field \_ Test Date AUGUST 26, 1982 MESA VERDE Formation -Shut-in 18.5 hou Status of Well PRESSURE GRADIENT DEPTH Psi/Ft. Feet Psig 1500 -1092 0 0.038 1167 2000 0.038 4000 1242 4900 1279 0.041 5100 0.050 1400 1289 5300 1299 0.050 5270\* 0.050 \*Mid-Perf 1300 -Psig Datum Pressure 1200 1100 1000 900 6669 Elev. Datum 5164-5376 Total Depth 7518 Perf. Ft. 2 1/16 in. to 5350 Tubing Ft. in. to 7518 5 1/2 Ft. Casing Tubing Press. Casing Press. 887 Water Level None Oil Level None 800 Temperature 139 5300 3F 6a Ft. Range 0-4000 Element No. 50665 Last Test Date Pressure Last Test Date Psig 700 6000 5000 3000

DEPTH: FEET

Township 26 North , Range 6 West , County Rio Arriba , State New Mexico

Caulkins Oil Company State "B" Comm 233 E SW 1/4 Section 16 26 North 6 West



## CAULKINS OIL COMPANY

P. O. BOX 780 FARMINGTON, NEW MEXICO 87401

October 4, 1982

Mr. Frank Chayez Oil Conservation Division 1000 Rio Brazos Road Aztec, New Mexico 87410

> Re: Downhole Commingled Production Caulkins Oil Company State "B" Comm 233E Unit K Sec.16 26N 6W Rio Arriba County, New Mexico

Dear Mr. Chavez,

Following are results of tests taken on Chacra and Mesa Verde Zones before Commingling well.

Baker Model "D" Production Packer with expendable Plug was set in casing at 5405' to shut off Dakota Zone. Ran Baker Model "R" Double Grip Packer on 2 1/16" 3.25# IJ Tubing to 5350' with Packer set at 4005' for Mesa Verde Test. Ran 2 1/16" 3.25# IJ Tubing to 3900' for Chacra Test.

8-26-82 Bottom hole pressure tests run. Mesa Verde BHP 1297#. Chacra BHP 1003#. Copy of Test attached. Rate of flow thru 3/4" choke after 3 hrs. Mesa Verde Zone 849 MCFPD Chacra Zone 1062 MCFPD

From results of tests we recommend following breakdown for all future production from commingled Chacra Mesa Verde Zones.

Chacra Zone Mesa Verde Zone 56% of all gas 44% of all gas and 100% of all Oil

Yours very truly,

Charles Verquer, Superintendent

Caulkins Oil Company