

May 18, 1995

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Mr. William J. LeMay, Director New Mexico Oil Conservation Division 2040 S. Pacheco Street P. O. Box 6429 Santa Fe, NM 87505

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Southern

Rockies

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Unit

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Application for Exception to Rule 303-A Downhole Commingling Jicarilla "C" Well #3 1650' FSL & 990' FEL, Unit I Section 23-T26N-R5W Basin Dakota and Tapacito Gallup Pools <u>Rio Arriba County, New Mexico</u>

Amoco Production Company hereby requests administrative approval to downhole commingle production from the Basin Dakota and Undesignated Gallup Pools in the Jicarilla "C" Well #3 referenced above. The Jicarilla "C" Well #3 was originally a dual completion in the Dakota and Gallup formations. This well has a marginal Gallup formation which is being produced dually with the Dakota which if left as a dual completion, the marginal zone would be shut-in in the near future. We plan to complete the well with both the Dakota and Gallup formations being downhole commingled in the wellbore. The two zones are expected to produce at a total commingled rate of about 235 MCFD with 5 BOPD. The ownership (WI, RI) of these pools is identical in this wellbore. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserves and violation of correlative rights. Offset operators to this well will receive a copy of this application by certified mail.

The allocation method that we plan to use for this commingled well is as follows. Since these formations have been producing for some time, we have a good historical representation of the production by formation. Based on historical production we recommend that the allocation for gas production be 74% from the Dakota formation and 26% from the Gallup formation. Liquid production in this well has been restricted due to liquid loading problems occurring in these pressure depleted gas reservoirs. The downhole commingling and subsequent addition of a plunger lift system should increase the capability of the marginal formations to again produce condensate. Based on that premise, we propose to allocate 80% of the liquid production to the Dakota formation and 20% of the liquid production to the Gallup formation. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

Attached to aid in your review are plats showing the location of the well and offset wells in the same formations, a historical production plot and a C-102 for each formation. This spacing unit is on a federal lease and a copy of the application will be sent to the BLM requesting their consent.

Should you have questions concerning this matter, please contact me at (303) 830-5344.

Sincerety, Hamil Pamela W. Staley

Enclosures

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cc: Steve Smethie Patty Haefele

> Frank Chavez, Supervisor NMOCD District III 1000 Rio Brazos Road Aztec, NM 87410

Duane Spencer Bureau of Land Management 1235 La Plata Hwy Farmington, NM 87401

Application for Exception to Rule 303: SEGREGATION OF PRODUCTION FROM POOLS

Requirements

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(1) Name and address of the operator:

Amoco Production Company P.O. Box 800 Denver, CO 80201

(2) Lease name, well number, well location, name of the pools to be commingled:

Lease Name:	Jicarilla "C" Well #3
Well Location:	1650' FSL & 990' FEL Unit I Section 23-T26N-R5W Rio Arriba County, New Mexico
Pools Commingled:	Tapacito Gallup Pool Basin Dakota Pool

(3) A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.

Attached

(4) A current (within 30 days) 24-hour productivity test on Division Form C-116 showing the amount of oil, gas and water produced from each zone.

The Basin Dakota produced an average stabilized rate of 114 MCFD and 0.9 BCPD. The Tapacito Gallup zone produced at an average rate of about 14 MCFD and 0 BCPD.

(5) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes.

Tapacito Gallup Completion: Basin Dakota Completion: Historical production curve attached. Historical production curve attached.

(6) Estimated bottom hole pressure for each zone. A current (within 30 days) measured bottom hole pressure for each zone capable of flowing.

Bottom hole pressures were estimated from 24 hour bottom hole shut-in pressures in the Gallup and Dakota formations in the Jicarilla field. Estimated bottom hole pressure in the Gallup and the Dakota formations is 900 PSI.

(7) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the wellbore.

The fluids have no abnormal components that would prohibit commingling, or promote the creation of emulsions or scale. Amoco has applied for and received several downhole commingling orders in this area including wells in which these two formations have been successfully downhole commingled with no apparent incompatibility in the commingled fluids.

(8) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams:

Since the BTU content of the produced fluids are very similar, we would expect the commingled production to have the same value as the sum of the individual streams.

(9) A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula:

The allocation method that we plan to use for this commingled well is as follows. Since these formations have been producing for some time, we have a good historical representation of the production by formation. Based on historical production we recommend that the allocation for gas production be 74% from the Dakota formation and 26% from the Gallup formation. Liquid production in this well has been restricted due to liquid loading problems occurring in these pressure depleted gas reservoirs. The downhole commingling and subsequent addition of a plunger lift system should increase the capability of the marginal formations to again produce condensate. Based on that premise, we propose to allocate 80% of the liquid production to the Dakota formation and 20% of the liquid production to the Gallup formation. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

(10) A statement that all offset operators and, in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.

BLM will receive a copy of this application by certified mail. The offsetting operators listed on the attached sheet will receive a copy of this application by certified mail.





SCALE

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AMOCO PRODUCTION COMPANY PLAT MAP Jicarilla C 3 Dakota

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1995

IN. = 2,000 FT. MAY

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NEW MEXICO OIL CUNSEEVATION COMMISSION WELL LOCATION AND ACERAGE DEDICATION PLAT

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ERNST ENGINEERING CO." DURANGO, COLORADO

LIST OF ADDRESSES FOR OFFSET OPERATORS Jicarilla "C" Well #3

*Marathon Oil Co.*P.O. Box 552Midland, TX 79702

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