

MERIDIAN OIL

OIL CONSERVATION DIVISION
RECEIVED

1994 JUL 7 11 AM 8 50
July 7, 1994

New Mexico Oil Conservation Division
Attn: Mr. Bill LeMay
P.O. Box 2088
310 Old Santa Fe Trail
Santa Fe, New Mexico

**RE: Reid #13
Unit I, Section 18, T28N, R09W
San Juan, New Mexico
Downhole Commingling Request**

Dear Mr. LeMay:

Meridian Oil, operator for the Southland Royalty Company, respectfully requests administrative approval to downhole commingle the Aztec Pictured Cliffs and Basin Fruitland Coal pools in the referenced well. Ownership for the zones to be commingled is common. All offset interest owners shown on the attached plat and the Bureau of Land Management will receive notice of this commingling application.

Precedent for commingling the referenced zones in this area has been established in the Reid #8 (Unit L, Section 19, T28N, R09W) per NMOCD Administrative Order #DHC-856, dated September 3, 1992. This well is producing with no adverse effects from commingling.

The Reid #13 was completed in the Pictured Cliffs in 1959. Currently the well is shut in due to a suspected casing failure, which was isolated in December 1992 with a packer. The well has cumulative production of 998 MMCF. Meridian plans to repair the failed casing in the existing wellbore, complete Fruitland Coal interval, and commingle the Fruitland Coal with the Pictured Cliffs production. A post workover deliverability of 60 MCFD is predicted from the Pictured Cliffs interval.

Based on Fruitland Coal completions in this area, ultimate reserves of 851 MMCF and an initial deliverability of 150 MCFD are estimated for the Fruitland Coal zone in the Reid #13. Currently, the Pictured Cliffs is marginally economic, therefore, the addition of the Fruitland Coal will ensure continued Pictured Cliffs production and prevent resources from being wasted.

The fluids in the two reservoirs are compatible and no precipitates will be formed which could potentially damage either reservoir. The reservoir parameters of each zone are such that underground waste will not be caused by the proposed commingling. Shut-in pressures for the Pictured Cliffs and Fruitland Coal are estimated to be 350 psi and 320 psi, respectively.

The allocation of the commingled production will be calculated using flow tests from the Pictured Cliffs and Fruitland Coal zones during completion operations. Meridian will consult with the district supervisor of the Aztec NMOCD office for approval of the allocation.

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Mr. Bill LeMay
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Approval of this commingling application will prevent resources from being wasted and protect correlative rights. Included with this letter are plats showing ownership of offsetting leases for both formations, copies of letters to offset operators and the Bureau of Land Management, and a detailed report of fluid compatibility.

If you have any questions concerning this matter please contact Ms. Lori Lantz at (505) 599-4024. Your attention to this matter is greatly appreciated.

Sincerely,



Travis D. Stice
Regional Engineer

LLL:III

Attachments

cc: Frank T. Chavez - NMOCD/Aztec
Peggy Bradfield
Well File

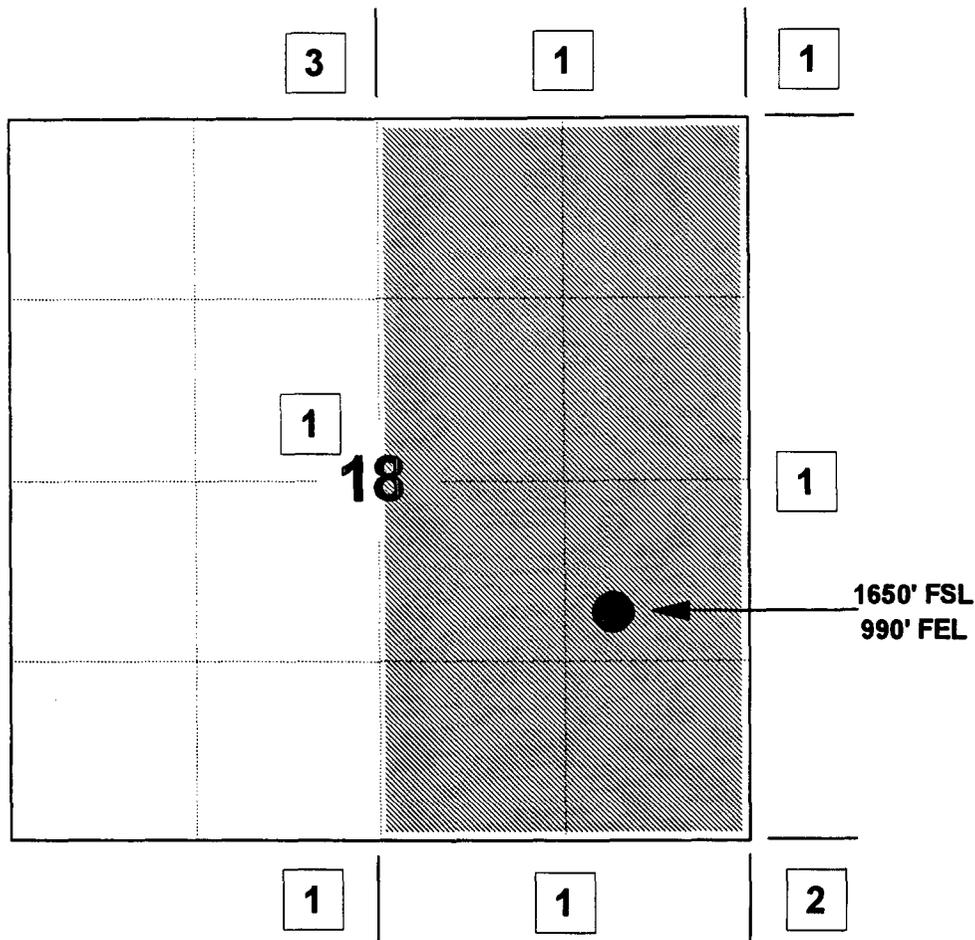
MERIDIAN OIL INC

REID #13

OFFSET OPERATOR \ OWNER PLAT

Unorthodox Fruitland Coal Well Location

Township 28 North, Range 9 West



1) Southland Royalty Company

2) Amoco Production Company
Conoco, Inc.

PO Box 800, Denver, CO 80201 &

10 Desta Dr., Suite 100W, Midland, Tx 79705-4500

3) Southland Royalty Company & Conoco, Inc.

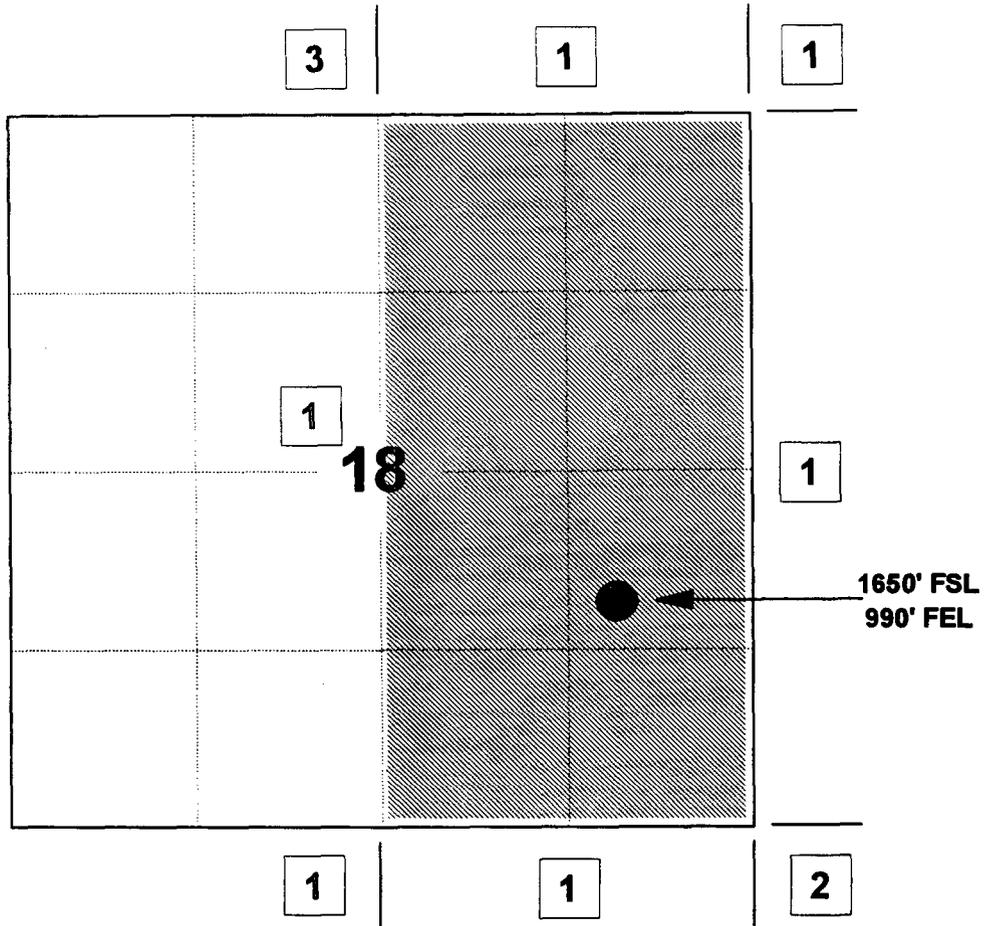
MERIDIAN OIL INC

REID #13

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

Township 28 North, Range 9 West



1) Southland Royalty Company

2) Amoco Production Company

PO Box 800, Denver, CO 80201 &

Conoco, Inc.

10 Desta Dr., Suite 100W, Midland, Tx 79705-4500

3) Southland Royalty Company

&

Conoco, Inc.

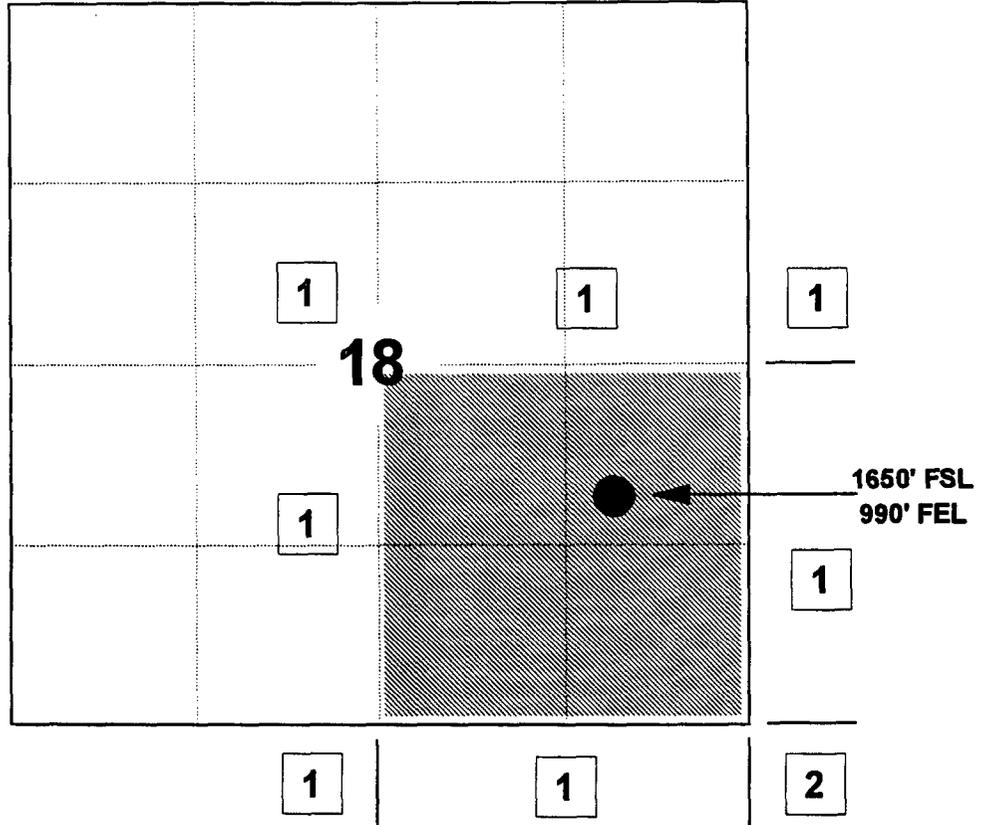
MERIDIAN OIL INC

REID #13

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

Township 28 North, Range 9 West



1) Southland Royalty Company

2) Amoco Production Company

PO Box 800, Denver, CO 80201 &

Conoco, Inc.

10 Desta Dr., Suite 100W, Midland, Tx 79705-4500

MERIDIAN OIL

July 6, 1994

Bureau of Land Management
1235 La Plata Highway
Farmington, New Mexico 87401

RE: **Reid #13**
Unit I, Section 18, T28N, R09W
San Juan, New Mexico
Downhole Commingling Request

Gentlemen:

Meridian Oil Inc. is in the process of applying for a downhole commingling order from the New Mexico Oil Conservation Division (NMOCD) for the referenced well located in San Juan County, New Mexico. The approved application will commingle the Pictured Cliffs and the Fruitland Coal pools.

The purpose of this letter is to notify you of Meridian's application. If you have no objections to the proposed NMOCD commingling order, we would appreciate your signing this letter and returning it to this office.

Your prompt attention to this matter would be appreciated.

Sincerely,



Travis D. Stice
Regional Engineer

LLL:lll

Wavier approval.

Date: _____

July 7, 1994

Amoco Production Company
PO Box 800
Denver, CO 80201

**RE: Reid #13
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Travis D. Stice
Regional Engineer

LLL:III

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Date: _____

MERIDIAN OIL

July 6, 1994

Conoco, Inc.
10 Desta Dr.
Suite 100W
Midland, TX 79705-4500

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Sincerely,



Travis D. Stice
Regional Engineer

LLL:III

Wavier approval.

Date: _____

Reid #13

MONTHLY GAS PRODUCTION ALLOCATION FORMULA

GENERAL EQUATION

$$Q_t = Q_{ftc} + Q_{pc}$$

WHERE: Q_t = TOTAL MONTHLY PRODUCTION (MCF/MONTH)
 Q_{ftc} = FRUITLAND COAL (ftc) MONTHLY PRODUCTION
 Q_{pc} = PICTURED CLIFFS (pc) MONTHLY PRODUCTION (MCF/MONTH)

REARRANGING THE EQUATION TO SOLVE FOR Q_{ftc} :

$$Q_{ftc} = Q_t - Q_{pc}$$

ANY PRODUCTION RATE OVER WHAT IS CALCULATED FOR THE PICTURED CLIFFS (PC) USING THE APPLIED FORMULA IS FRUITLAND COAL (FTC) PRODUCTION.

ICTURED CLIFFS (PC) FORMATION PRODUCTION FORMULA IS:

$$Q_{pc} = Q_{pci} \times e^{-\{D_{pc} \times (t)\}}$$

WHERE: Q_{pci} = INITIAL PC MONTHLY FLOW RATE (DETERMINED FROM LAST MONTH OF PC ONLY PRODUCTION, PRIOR TO RECOMPLETION & COMMINGLE)

D_{pc} = PICTURED CLIFFS MONTHLY DECLINE RATE CALCULATED FROM DECLINE CURVE AND MATERIAL BALANCE ANALYSIS:

$$D_{pc} = (0.00330/M)$$

THUS: $Q_{ftc} = Q_t - Q_{pci} \times e^{-\{0.00330\} \times (t)}$

WHERE: (t) IS IN MONTHS

REFERENCE: Thompson, R. S., and Wright, J. D., "Oil Property Evaluation", pages 5-2, 5-3, 5-4.