

MERIDIAN OILOIL CONSERVATION DIVISION
RECEIVED

JAN 10 1995 8 52

January 5, 1995

New Mexico Oil Conservation Division
Attn: Mr. William LeMay
P.O. Box 2088
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

RE: Zachry #8
Unit A, Section 33, T29N, R10W
San Juan County, New Mexico
Downhole Commingling Request

Dear Mr. LeMay:

Meridian Oil Inc. is applying for an administrative downhole commingling order for the referenced well in the Fulcher Kutz Pictured Cliffs and the Basin Fruitland Coal fields. The ownership of the zones to be commingled is common. The offset operators to this well are Amoco Production Company, S G Interests and Texaco Exploration & Production, Inc. The Bureau of Land Management and the above mentioned operators have received notification of this downhole commingling.

The Fruitland Coal and Pictured Cliffs wells producing in this area operated by Meridian and others are marginally productive. Based on offset production in this area, drilling of separate wells and dual completions to produce the Fruitland Coal and Pictured Cliffs are not economically justified. The only economical way to recover the Fruitland Coal and Pictured Cliffs reserves in this drill block is to downhole commingle production from both zones in this well.

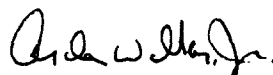
It is proposed to complete the Pictured Cliffs formation and establish production. It is then proposed to set a bridge plug above the Pictured Cliffs, perforate and stimulate the Fruitland Coal, and test its production. The bridge plug will then be removed, and both zones produced through a single string of tubing. The reservoir characteristics of each of the subject zones are such that underground waste will not be caused by the proposed commingling. Neither producing interval makes oil, and only minimal amounts of similar water are produced in the offset wells. The shut-in pressures for the Pictured Cliffs and Fruitland Coal are 194 and 337 psi, respectively.

The allocation of the commingled production will be calculated using the attached allocation formula. This formula is based on production performance of the Zachry #8, and uses accepted Reservoir Engineering methods to allocate the Pictured Cliffs reserves. This addresses the Fruitland Coal producing characteristics of early life inclining production rates.

New Mexico Oil Conservation Division
Mr. William LeMay
Zachry #8
Downhole Commingling Request
Page Two

Approval of this commingling application will allow for the prevention of wasted resources and protection of correlative rights. Included with this letter are plats showing ownership of offsetting leases for both the Pictured Cliffs and Fruitland Coal, a copy of letters to the BLM and offset operators, decline curve and an allocation formula.

Sincerely,



Arden L. Walker, Jr.
Regional Production Engineer

LJB:tdg

Attachments

cc: Frank T. Chavez/Aztec NMOCD
Peggy A. Bradford/MOI Regulatory
Bureau of Land Management
Well File

MERIDIAN OIL

January 5, 1995

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

RE: Zachry #8
Unit A, Section 33, T29N, R10W
San Juan County, 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 Fulcher Kutz Pictured Cliffs and the Basin Fruitland Coal fields.

The purpose of this letter is to notify you of Meridian's application. If you have no objections to the NMOCD issuing a commingling order, we would appreciate your signing this letter and returning the original to Mr. LeMay at the following address with a copy to this office:

New Mexico Oil Conservation Division
Mr. William LeMay
P.O. Box 2088
Santa Fe, New Mexico 87501

Your prompt attention to this matter would be appreciated.

Sincerely,



Leonard J. Biemer
Production Engineer

LJB:tdg

**The undersigned hereby waives objection to the referenced
Downhole Commingle Request.**

Company/Owner: _____

Title: _____

Date: _____

MERIDIAN OIL

January 5, 1995

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

RE: Zachry #8
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San Juan County, New Mexico
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Production Engineer

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Company/Owner: _____

Title: _____

Date: _____

MERIDIAN OIL

January 5, 1995

S G Interests
811 Dallas
Suite 1505
Houston, Texas 77002

RE: Zachry #8
Unit A, Section 33, T29N, R10W
San Juan County, New Mexico
Downhole Commingling Request

Gentlemen:

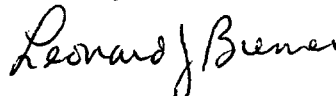
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Production Engineer

LJB:tdg

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Company/Owner: _____

Title: _____

Date: _____

MERIDIAN OIL

January 5, 1995

Texaco Exploration & Production, Inc.
P.O. Box 2100
Denver, Colorado 80201

RE: Zachry #8
Unit A, Section 33, T29N, R10W
San Juan County, New Mexico
Downhole Commingling Request

Gentlemen:

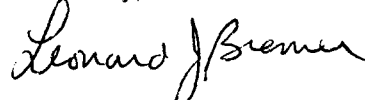
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Production Engineer

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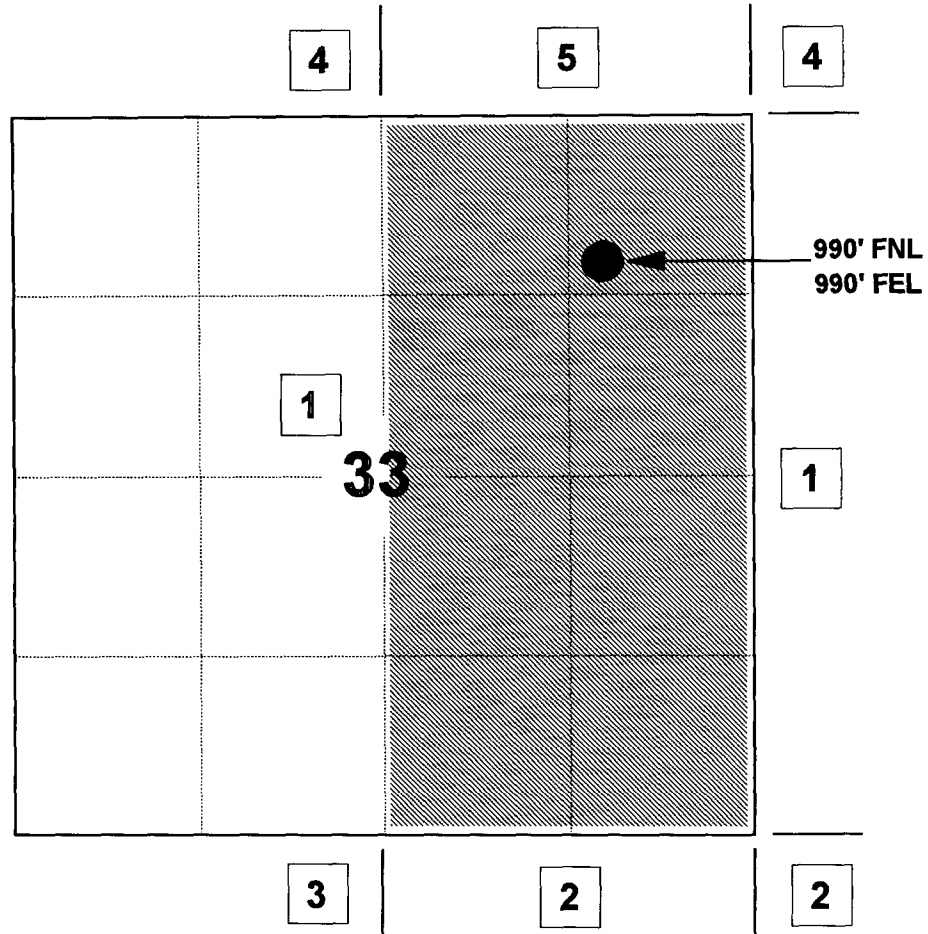
MERIDIAN OIL INC

ZACHRY #8

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Formations Commingle Well

Township 29 North, Range 10 West



1) Meridian Oil Inc.

2) Meridian Oil Inc. & Southland Royalty Company

3) Meridian Oil Inc. Southland Royalty Company &

Texaco Exploration & Production, Inc.

PO Box 2100, Denver, CO 80201

4) S G Interests

811 Dallas, Suite 1505, Houston, TX 77002

5) Amoco Production Company

PO Box 800, Denver, CO 80201

Fruitland Coal Formation

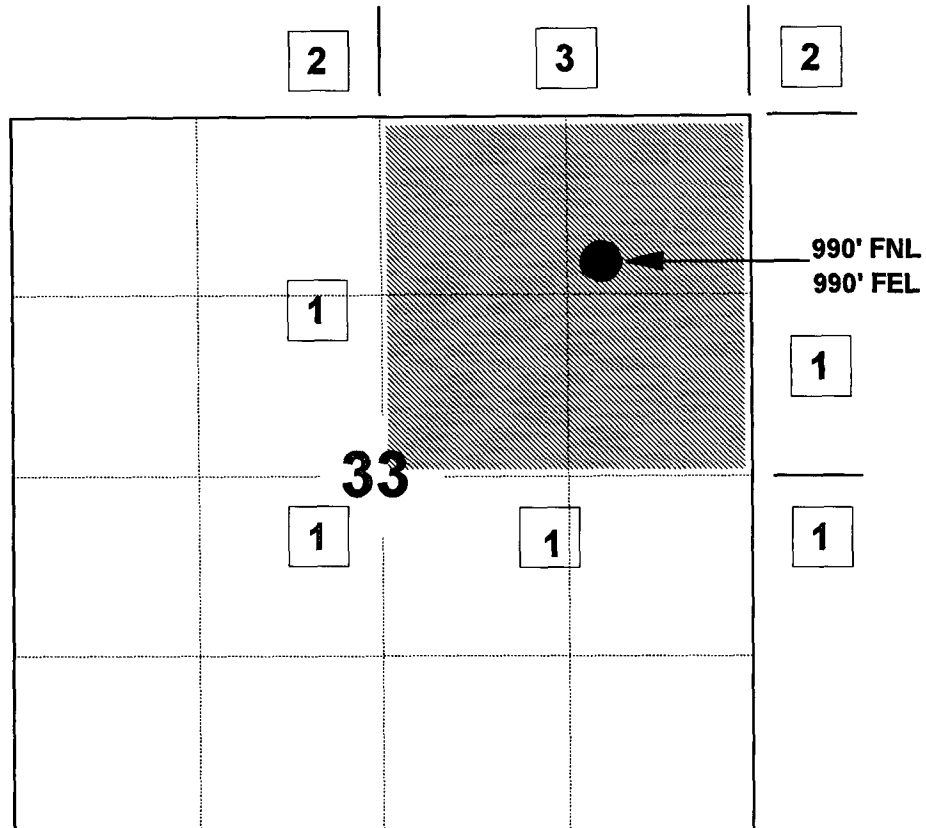
MERIDIAN OIL INC

ZACHRY #8

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Formations Commingle Well

Township 29 North, Range 10 West



1) Meridian Oil Inc.

2) S G Interests

811 Dallas, Suite 1505, Houston, TX 77002

3) Amoco Production Company

PO Box 800, Denver, CO 80201

Pictured Cliffs Formation

ZACHRY #8
NE/NE 33-29N-10W
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 (Mcf / Month)
 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 (Q_{pc}), Using the Applied Formula is Fruitland Coal Production (Q_{ftc}).

The Pictured Cliffs (Q_{pc}) Formation Production Formula is:

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

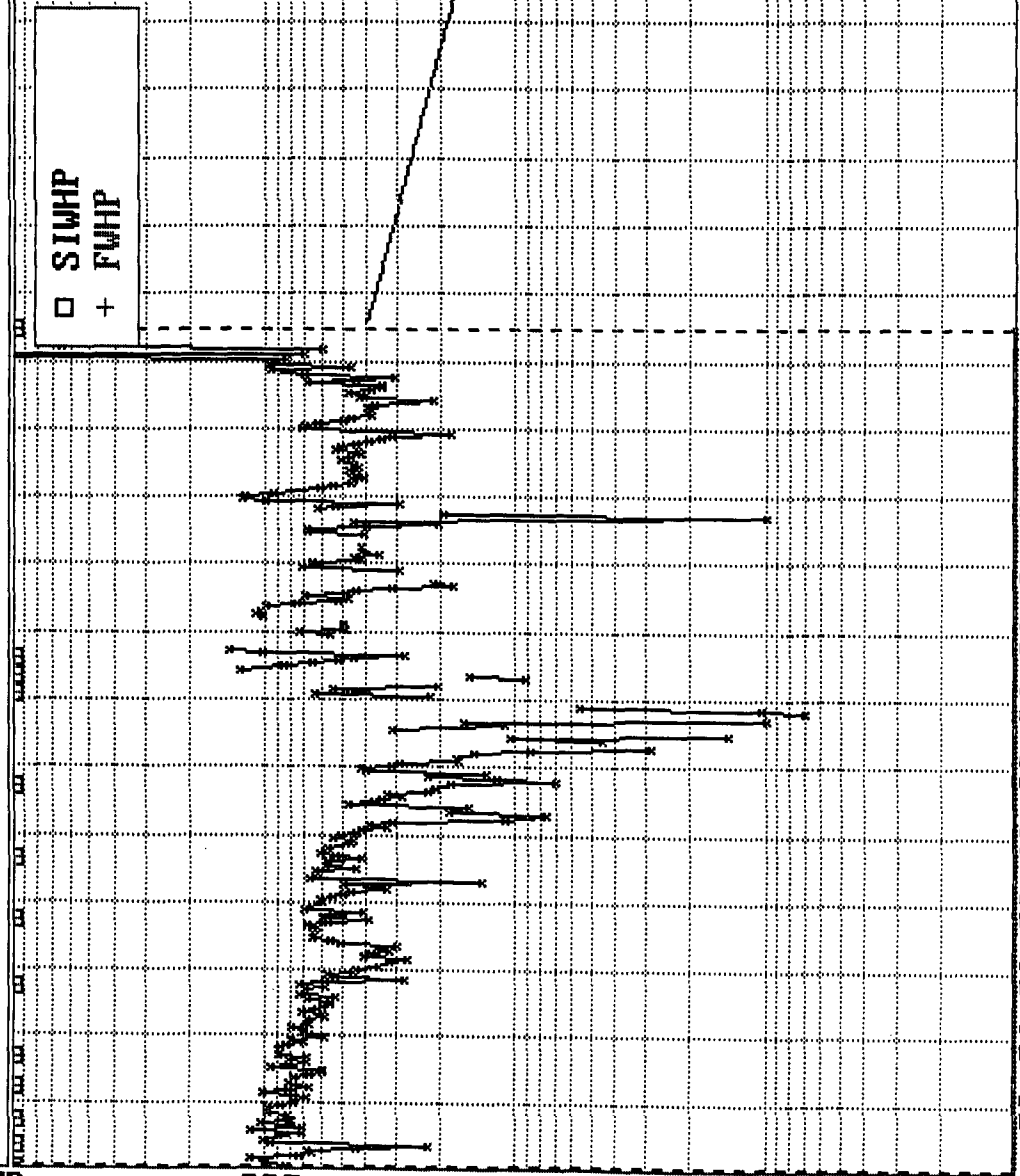
WHERE: Q_{pci} = Pictured Cliffs Initial Monthly Rate = 1,243 Mcf/M (Determined from the attached decline curve)
 D_{pc} = Pictured Cliffs Monthly Decline Rate Calculated from Decline Curve and Material Balance Analysis:
 $D_{pc} = (0.0067/M)$

THUS: $Q_{ftc} = Q_t - Q_{pci} \times e^{\{-(0.0067) \times (t)\}}$

NOTE: (t) is in Months

WATER
OIL/GAS
OIL
GAS

ZACHRY : 8 : PICTURED CLIFFS



Prop 49 *

- ☒ GAS Mcf/d
- ☐ OIL Bbl/d
- ☐ OIL/GAS
- ☐ WATER Bbls/d

Rate Time
Semi Log

EUR 1,443,410

Cum 1,310,311

Rem 133,099

Rem% 9.2%

Yrs 16.92

Date 1/1/1995

Act 0

Qmo 1,243

Q 40.2

n 0

De 7.993

Qab 10

GetQual LJB

Major = GAS

≈ 0.0067 Mcf/M



STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

OIL CONSERVATION DIVISION
RECEIVED

The Thin
DRUG FREE
It's a Kind of Mind

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

95 JAN 21 AM 8 52

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

Date: _____

DK-1088

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

RE: Proposed MC _____
Proposed NSL _____
Proposed WFX _____
Proposed NSP _____

Proposed DHC ✓ _____
Proposed SWD _____
Proposed PMX _____
Proposed DD _____

Gentlemen:

I have examined the application received on 1/9/94
for the Meridian Zachry #8
OPERATOR LEASE & WELL NO.

A-33-29N-10W and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,

[Signature]

MERIDIAN OIL

OIL CONSERVATION DIVISION
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'95 JAN 17 AM 8 52

January 5, 1995

S G Interests
811 Dallas
Suite 1505
Houston, Texas 77002

DHC-1088

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Sincerely,

Leonard J. Biemer

Leonard J. Biemer
Production Engineer

LJB:tdg

**The undersigned hereby waives objection to the referenced
Downhole Commingle Request.**

Company/Owner: *Ray S. Wilson - SG INTERESTS*

Title: *Vice President*

Date: *Jan. 9, 1995*

MERIDIAN OIL

DBE 1088

OIL CONSERVATION DIVISION
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'95 FEB 8 AM 8 52

January 5, 1995

Texaco Exploration & Production, Inc.
P.O. Box 2100
Denver, Colorado 80201

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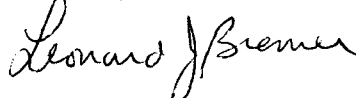
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Production Engineer

LJB:tdg

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Company/Owner: D. E. Cox

Title: Texaco Exploration and Production Inc./Asset Manager

Date: 1/30/95