BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

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

Date: 5/26/93

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

RE: Proposed MC _____   Proposed DHC ___X_____
      Proposed NSL _____   Proposed SWD _____
      Proposed WFX _____   Proposed PMX _____
      Proposed NSP _____   Proposed DD _____

Gentlemen:

I have examined the application received on _5/24/93_____

for the _Merlin_____ _S.J. 29-7 #519_____
                OPERATOR   LEASE & WELL NO.

_B-8-29N-7W_____ and my recommendations are as follows:
UL-S-T-R

_Approve_____

_____

_____

_____

_____

Yours truly,

MERIDIAN OIL

May 19, 1993

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

RE: San Juan 29-7 Unit #519
        SW/4, Section 8, T29N, R07W
        Rio Arriba 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 Pictured Cliffs and the Basin Fruitland Coal fields. The ownership of the zones to be commingled is common. All offsetting acreage in this case belongs to Meridian Oil Inc. A letter has been sent to the Bureau of Land Management notifying them.

The Fruitland Coal and Pictured Cliffs wells producing in this area operated by Meridian 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.
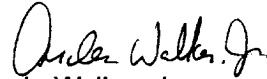
It is proposed to complete the Pictured Cliffs formation and test its production. It is then proposed to set a bridge plug above the Pictured Cliffs, perforate and stimulate the Fruitland Coal, and test its production. The bridge plug will then be removed, and both zones produced through a single string 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 average shut-in pressures in the area for the Pictured Cliffs and Fruitland Coal are **819** and **950** psi, respectively.

The allocation of the commingled production will be calculated using the attached allocation formula. This formula is based on offset Pictured Cliffs production performance (material balance) and volumetrics, 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.

Meridian Oil Inc., 3535 East 30th St., P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700

New Mexico Oil Conservation Division
Mr. Bill LeMay
San Juan 29-7 Unit #519
Downhole Commingling Request
Page Two

Approval of this commingling application will allow for the prevention of wasted resources and protection of correlative rights. The nearby San Juan 29-7 Unit #583, NW/SW, Section 6, T29N, R12W has received downhole commingle approval. Included with this letter are plats showing ownership of offsetting leases for both the Pictured Cliffs and Fruitland Coal, a copy of the letter to the BLM and an allocation formula.

Sincerely,

Arden L. Walker, Jr.
Regional Production Engineer

KS:tg
Attachments

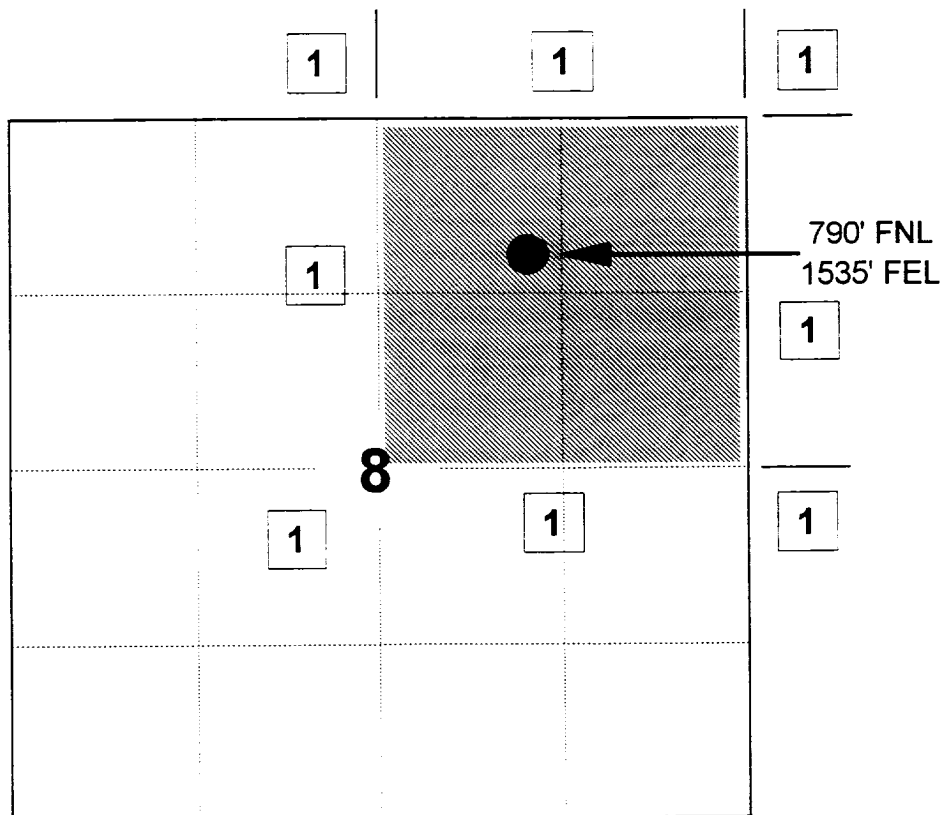cc: Frank T. Chavez - NMOCD/Aztec

MERIDIAN OIL INC

SAN JUAN 29-7 UNIT #519

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Formations Commingle

Township 29 North, Range 07 West

790' FNL
1535' FEL

8

1) Meridian Oil Inc

San Juan 29-7 Unit #519
NE/4 of Section 8, T-29-N, R-07-W
Rio Arriba County, NM
Fruitland Coal/Pictured Cliffs Commingle Application

PRODUCTION ALLOCATION FORMULA

GENERAL EQUATION:

$$Qt = Qftc + Qpc$$

WHERE: Qt   =   Total Monthly Production (MCF/MONTH)
           Qftc =   Fruitland Coal (FTC) Monthly Production (MCF/MONTH)
           Qpc =   Pictured Cliffs (PC) Monthly Production (MCF/MONTH)

REARRANGING THE EQUATION TO SOLVE FOR Qftc:

$$Qftc = Qt - Qpc$$

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

Pictured Cliffs (PC) Formation Production Formula is:

$$Qpc = Qpci * e^{\{-(Dpc)*(t)\}}$$

WHERE: Qpci = Initial PC monthly flow rate (determined from completion data)
           Dpc = Monthly Decline Rate based on PC Offsets
           ANNUAL DECLINE = 6.4 % Based on 18 well study in T-29-N, R-08-W

$$Dpc = (0.00533)$$

THUS: $Qpc = Qpci * e^{\{-(0.00533)*(t)\}}$

$$Qftc = Qt - Qpci * e^{\{-(0.00533)*(t)\}}$$

WHERE: (t) is time in months of production

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

San Juan 29-7 Unit #519
NE/4 of Section 8, T-29-N, R-07-W
Rio Arriba County, NM
Fruitland Coal/Pictured Cliffs Commingle Application

DETERMINATION OF Qpci:
(INITIAL PICTURED CLIFFS MONTHLY PRODUCTION)

$$\underline{Qpci = Qt(1) * Qpc(p) / \{Qpc(p) + Qftc(p)\}}$$

WHERE:

Qt(1) = **FIRST MONTH TOTAL PRODUCTION (MCF)**

Qpc(p)= **FINAL PICTURED CLIFFS PITOT GAUGE (MCF/D)**

Qftc(p)= **FINAL FRUITLAND COAL PITOT GAUGE (MCF/D)**

MERIDIAN OIL

May 19, 1993

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

RE: San Juan 29-7 Unit #519
        SW/4, Section 8, T29N, R07W
        Rio Arriba County, New Mexico
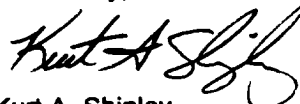   Downhole Commingling Request

Gentlemen:

Meridian Oil, Inc. is in the process of applying for a downhole commingling order for the San Juan 29-7 Unit #519 well located in SW/4, Section 8, T29N, R07W, N.M.P.M., Rio Arriba County, New Mexico, in the Pictured Cliffs and the Basin Fruitland Coal fields.

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

Your prompt attention to this matter would be appreciated.

Yours truly,

Kurt A. Shipley
Production Engineering

KS/tg

The above downhole commingling request is hereby approved:

_____

      Date: _____