



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

ADMINISTRATIVE ORDER DHC-1098

Meridian Oil Company
P.O. Box 4289
Farmington, New Mexico 87499-4289

RECEIVED
MAR - 9 1988

Attention: Scott H. Lindsay

OIL CON. DIV.
DIST. 3

*San Juan 28-5 Unit Well No.235
Unit K , Section 28, Township 28 North, Range 5 West, NMPM,
Rio Arriba County, New Mexico.
Tapacito Pictured Cliffs and Basin Fruitland Coal Pools*

Dear Mr. Lindsay:

Reference is made to your recent application for an exception to Rule 303-A of the Division Rules and Regulations to permit the subject well to commingle production from both pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 303-C, and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the two zones is hereby placed in abeyance.

In accordance with the provisions of Rule 303-C-4., total commingled oil production from the subject well shall not exceed 20 barrels per day, and total water production shall not exceed 40 barrels per day. The maximum amount of gas which may be produced daily from the well shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated pool as printed in the Division's San Juan Basin Gas Proration Schedule.

Proper allocation of the production from the subject well shall be determined using the allocation formula as shown on Exhibit "A" attached hereto.

FURTHER: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.

Pursuant to Rule 303-C-5, the commingling authority granted by the order may be rescinded by the Division Director if, in his opinion, conservation is not being best served by such commingling.

Administrative Order DHC-1098

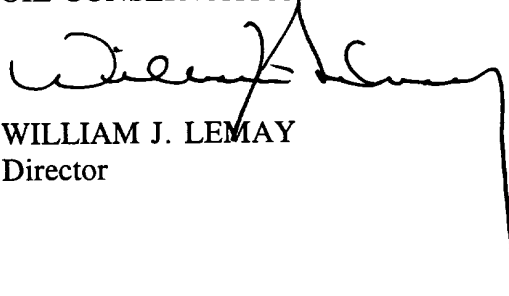
Meridian Oil Company

March 6, 1995

Page 2

Approved at Santa Fe, New Mexico on this 6th day of March, 1995.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read 'William J. Lemay', is written over the printed name and title. The signature is fluid and cursive, with a long vertical line extending downwards from the end of the signature.

WILLIAM J. LEMAY
Director

S E A L

WJL/BES

cc: Oil Conservation Division - Aztec ✓
Bureau of Land Management - Farmington

Exhibit "A"

S.J. 28-5 UNIT #235

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.

PICTURED CLIFFS (PC) FORMATION PRODUCTION FORMULA IS:

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

WHERE: Q_{pci} = INITIAL PC MONTHLY FLOW RATE (CALCULATED FROM FLOW TEST)
 D_{pc} = PICTURED CLIFFS MONTHLY DECLINE RATE CALCULATED FROM:
 $D_{pc} = (Q_{pci} - Q_{pcabd}) / N_{p(pc)}$
See Determination of Q_{pci} and PC Estimated Ultimate Recovery (EUR)
 $Q_{pcabd} = 300 \text{ MCF/M}$

WHERE: $N_{p(pc)}$ = PICTURED CLIFFS ESTIMATED ULTIMATE RECOVERY (EUR)
 $P^* \times 0.55 \text{ MMCF/PSI}^{**} \times R_f$
 P^* = INITIAL RESERVOIR PRESSURE (7 DAY SIBHP)
 R_f = RECOVERY (FIELD ANALOGY): = 0.95
 ** DETERMINED FROM MATERIAL BALANCE (FIELD ANALOGY) AND VOLUMETRIC RESERVES (LOG ANALYSIS)

By calculating PC EUR FROM SIBHP and determining PC initial flow rate, D_{pc} can then be estimated utilizing the previously described parameters

THUS: $Q_{ftc} = Q_t - Q_{pci} * e^{-\{D_{pc}\}(t)}$

WHERE: (t) IS IN MONTHS

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