

MERIDIAN OIL

OIL CONSERVATION DIVISION
RECEIVED

94 JAN 10 AM 8 43

January 4, 1994

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

RE: Rowley #5
Unit K, Section 17, T27N, 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 Pictured Cliffs and the Basin Fruitland Coal fields. The ownership of the zones to be commingled is common. The only offset operator to this well is Marathon Oil Company. The Bureau of Land Management and the above mentioned operator have received notification of this downhole commingle.

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.

The Pictured Cliffs formation is currently completed and marginally productive. It is 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 260 and 295 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 uses accepted Reservoir Engineering methods to allocate the Pictured Cliffs reserves. This addresses the Fruitland Coal producing characteristics of early life inclining production rates.

Fletcher BJB - Pictured Cliffs

New Mexico Oil Conservation Division
Mr. Bill LeMay
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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 the offset operator, and an allocation formula.

Sincerely,



Arden L. Walker, Jr.
Regional Production Engineer

SBD:tdg
Attachments

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

MERIDIAN OIL

January 4, 1994

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

RE: Rowley #5
Unit K, Section 17, T27N, R10W
San Juan County, New Mexico
Downhole Commingling Request

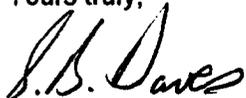
Gentlemen:

Meridian Oil, Inc. is in the process of applying for a downhole commingling order for the Rowley #5 well located in Unit K, Section 17, T27N, R10W, N.M.P.M., San Juan 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,



Scott B. Daves
Production Engineer

SBD/tdg

The above downhole commingling request is hereby approved:

Date: _____

MERIDIAN OIL

January 4, 1994

Marathon Oil Company
P.O. Box 552
Midland, Texas 79702

RE: Rowley #5
Unit K, Section 17, T27N, R10W
San Juan County, New Mexico
Downhole Commingling Request

Gentlemen:

Meridian Oil, Inc. is in the process of applying for a downhole commingling order for the Rowley #5 well located in Unit K, Section 17, T27N, R10W, N.M.P.M., San Juan 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.

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Yours truly,



Scott B. Daves
Production Engineer

SBD/tdg

The above downhole commingling request is hereby approved:

Date: _____

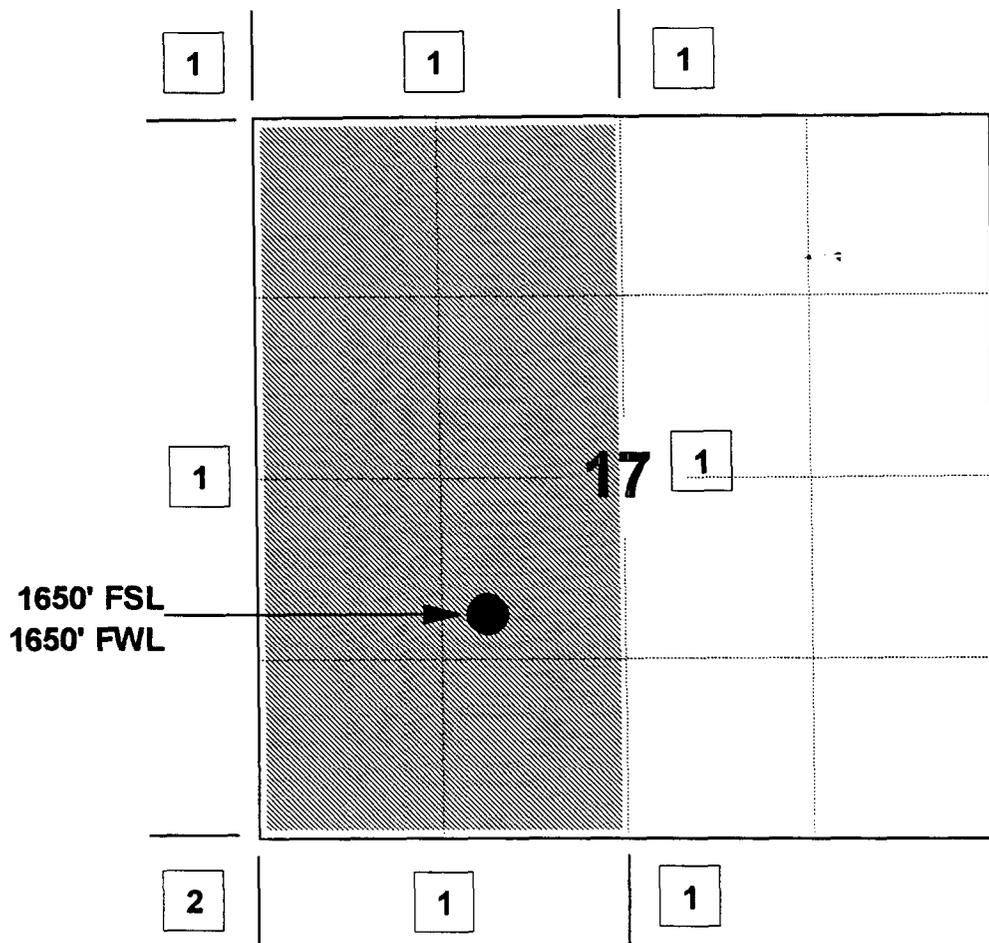
MERIDIAN OIL INC

ROWLEY #5

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

Township 27 North, Range 10 West



1) Meridian Oil Inc

2) Marathon Oil Company

PO Box 552, Midland, TX 79702

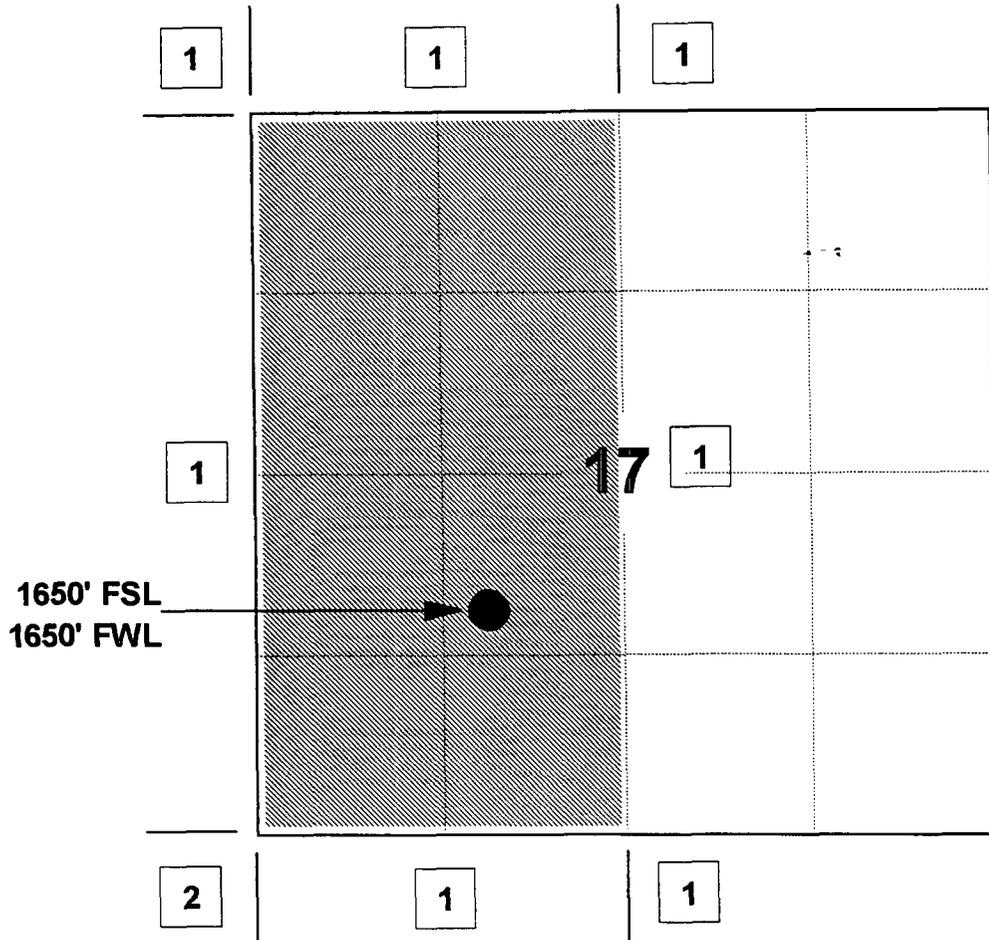
MERIDIAN OIL INC

ROWLEY #5

OFFSET OPERATOR \ OWNER PLAT

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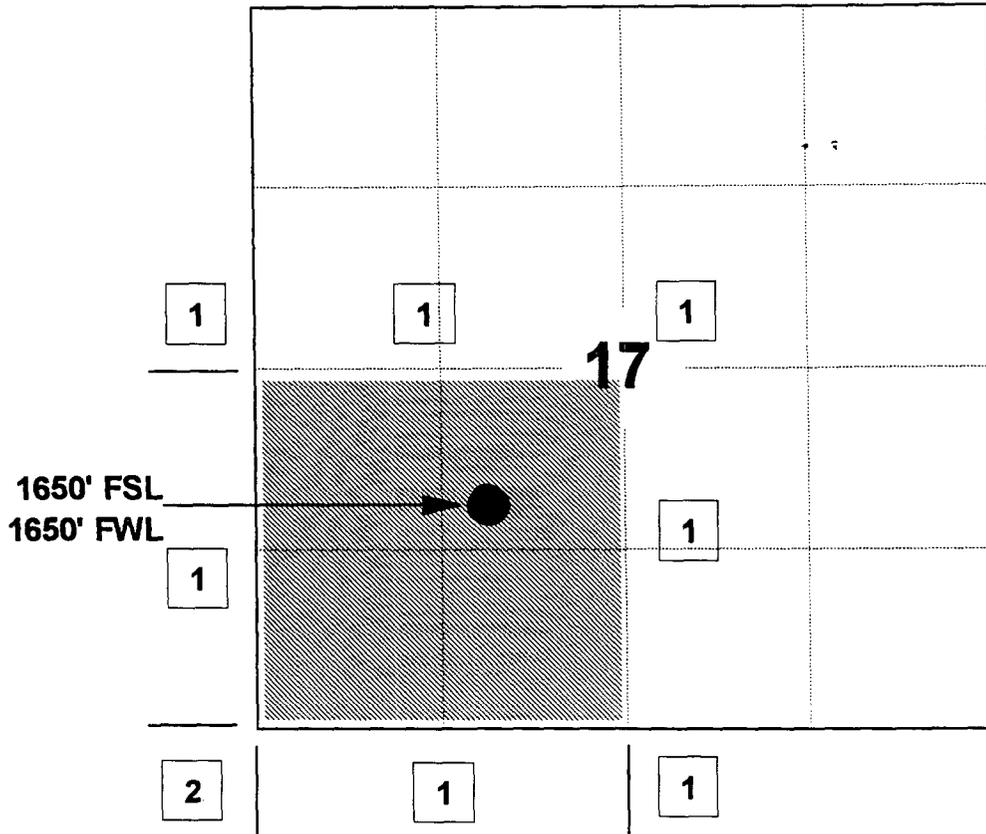
MERIDIAN OIL INC

ROWLEY #5

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

Township 27 North, Range 10 West



1) Meridian Oil Inc

2) Marathon Oil Company

PO Box 552, Midland, TX 79702

ROWLEY #5

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:

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

WHERE: Q_{pci} = INITIAL PC MONTHLY FLOW RATE = 450 MCF/M (DETERMINED FROM TESTED RATE AGAINST 75 PSI LINE PRESSURE AS OPPOSED TO HISTORICAL LINE PRESSURE OF 175 PSI)
 D_{pc} = PICTURED CLIFFS MONTHLY DECLINE RATE CALCULATED FROM DECLINE CURVE AND MATERIAL BALANCE ANALYSIS:

$$D_{pc} = (0.00094/M)$$

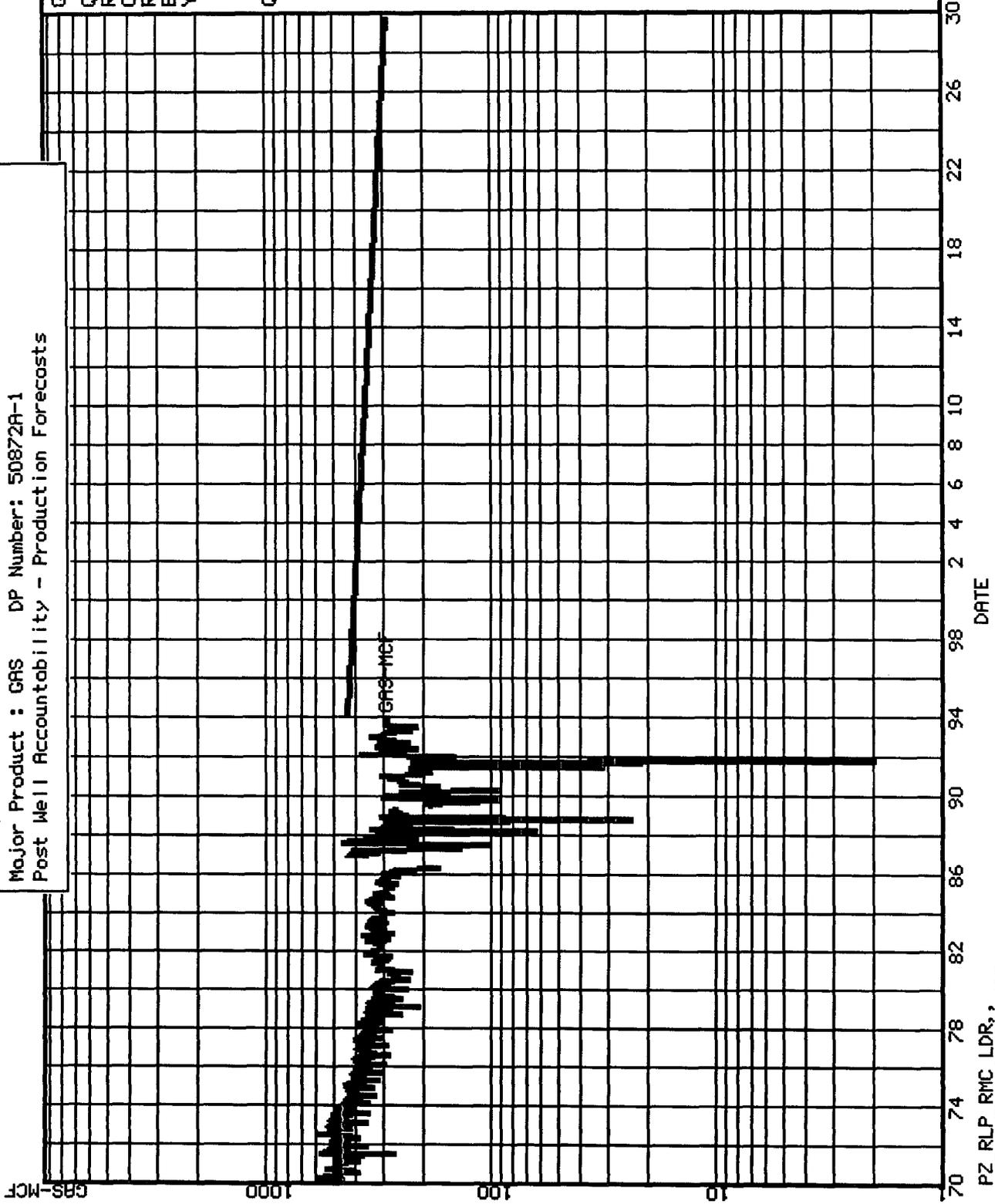
THUS: $Q_{ftc} = Q_t - Q_{pci} \times e^{-\{0.00094\} \times (t)}$

WHERE: (t) IS IN MONTHS

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

Lease : ROWLEY 5
 Field : FULCHER KUTZ P.C. (GAS)
 Location : 027N010W17K
 County, St : SAN JUAN NM
 Major Product : GAS DP Number: 50872A-1
 Post Well Accountability - Production Forecasts

GAS
 Qo1=94PDP
 Ref= 01/94
 Cum= 219.253
 Rem= 158.734
 EUR= 377.987
 Yrs= 35.833
 Qi= 450.0
 De= 1.128
 n= .000
 Qob= 299.9

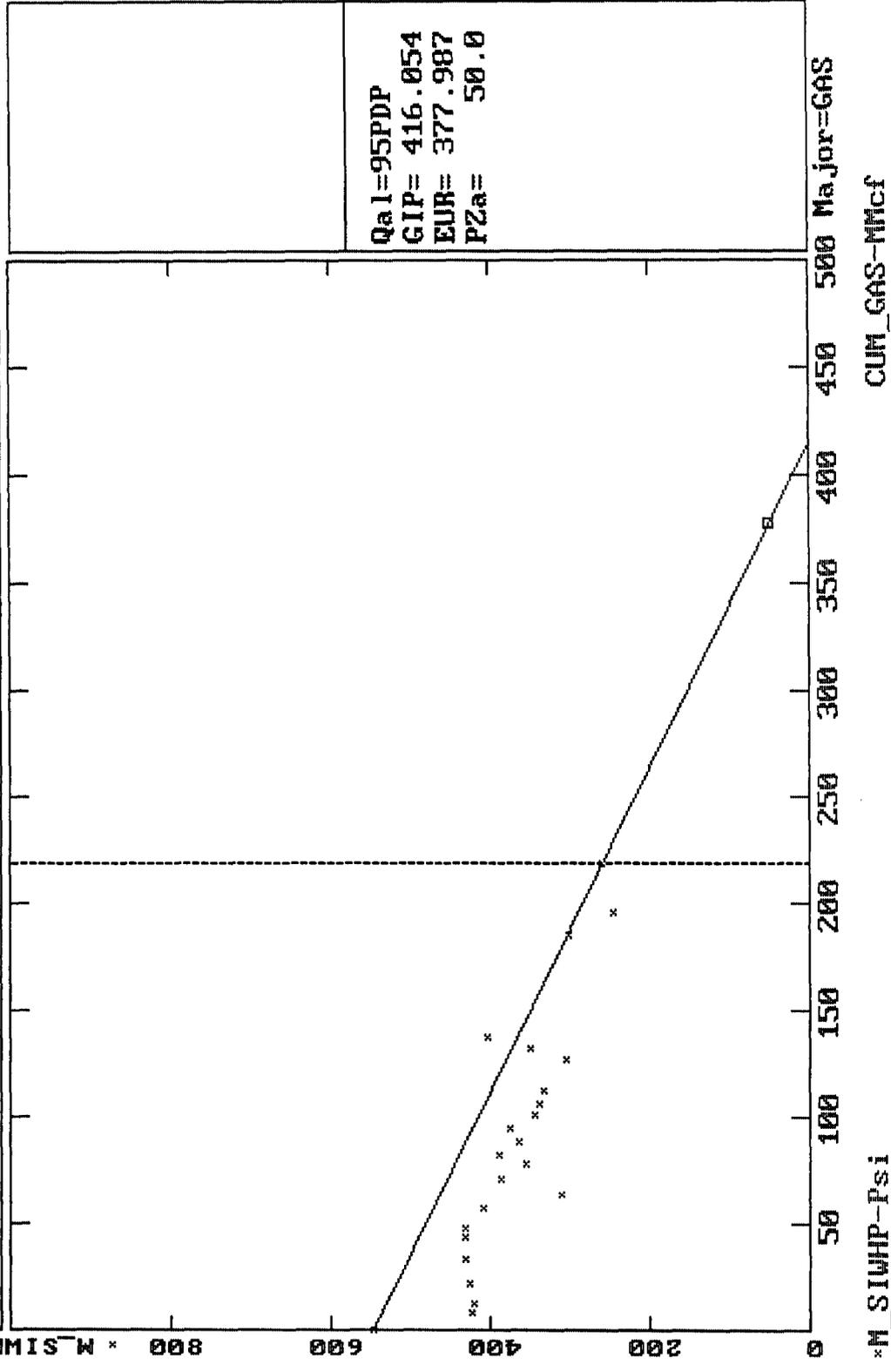


PZ RLP RMC LDR,²
 P/Z=R/T=322.576M/MCF.,,
 RLP RMC,²
 R/C CANDIDATE. R/T USED.,,

Prop: 12

ROWLEY 15 : 50872A-1

Qa1=95PDP
GIP= 416.054
EUR= 377.987
PZa= 50.0





CONSERVATION DIVISION
RECEIVED

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

94 JAN 25 AM 9 35

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

Date: 1-21-94 *ATTN: Ben Stone*

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

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

Proposed DHC X _____
Proposed SWD _____
Proposed PMX _____
Proposed DD _____

Gentlemen:

I have examined the application received on 1-7-94
for the Meridian Oil Inc. Rowley #5
OPERATOR LEASE & WELL NO.

K-17-27N-10W and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,

Ernie Busch