

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

RECEIVED

MAR 20 1989

O. C. D.
ARTESIA, OFFICE

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DENNIS G. KINSEY
TREASURER

Date: March 17, 1989

Mr. William J. Lemay, Director
NMOCD
Santa Fe, N.M. 87504-2088

Re: Downhole Commingling, Gas-Gas, YPC - SRC KZ State No. 6
Unit C, Sec 1-T19S-R24E, Eddy County

Yates Petroleum Corporation seeks Administrative Approval for dual completion and downhole commingling in subject well to permit sustained flow from two weak zones, the Penasco Draw-Permo Penn and the Penasco Draw-Morrow. The ownership of the zones to be commingled are the same.

A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases is attached hereto.

A current C-116 for the Morrow completion and the C-116 for the Canyon completion prior to shut in in May 1988, are attached hereto.

Production decline curves for both zones are submitted.

The shut-in tubing pressure for the Canyon zone was 525 psig before the zone was isolated, while the shut-in tubing pressure for the Morrow zone is 470 psig.

Neither zone produces any liquids in a quantity that can be measured. The Morrow sand which is susceptible to damage from liquids is protected with a standing valve.

The Morrow completion flows 12-13 MCFPD on sustained flow which economically is just about break-even. The Canyon completion has much better permeability and has a reserve of about 259 MMCF to the economic limit of 370 MCF per month.

By commingling the Morrow and Canyon, total reserves would be extended by 14 MMCF. Commingling can be accomplished by opening the sliding sleeve in the tubing below the Canyon completion, diagram of wellbore is attached.

Mr. William J. Lemay, Director

Page -2-

There will be no loss in value of produced gas by commingling since the wellhead prices for Canyon and Morrow are the same.

By commingling, the Canyon reserves become 260 MMCF and the Morrow is extended to 13 MMCF. It is suggested that commingled production be prorated as follows(formula attached):

Penasco Draw Permo-Penn	99.5 percent
Penasco Draw Morrow	0.5 percent

Offset operators and the USGS are notified of this proposed commingling by copy of this application.

Eddie M. Mahfood

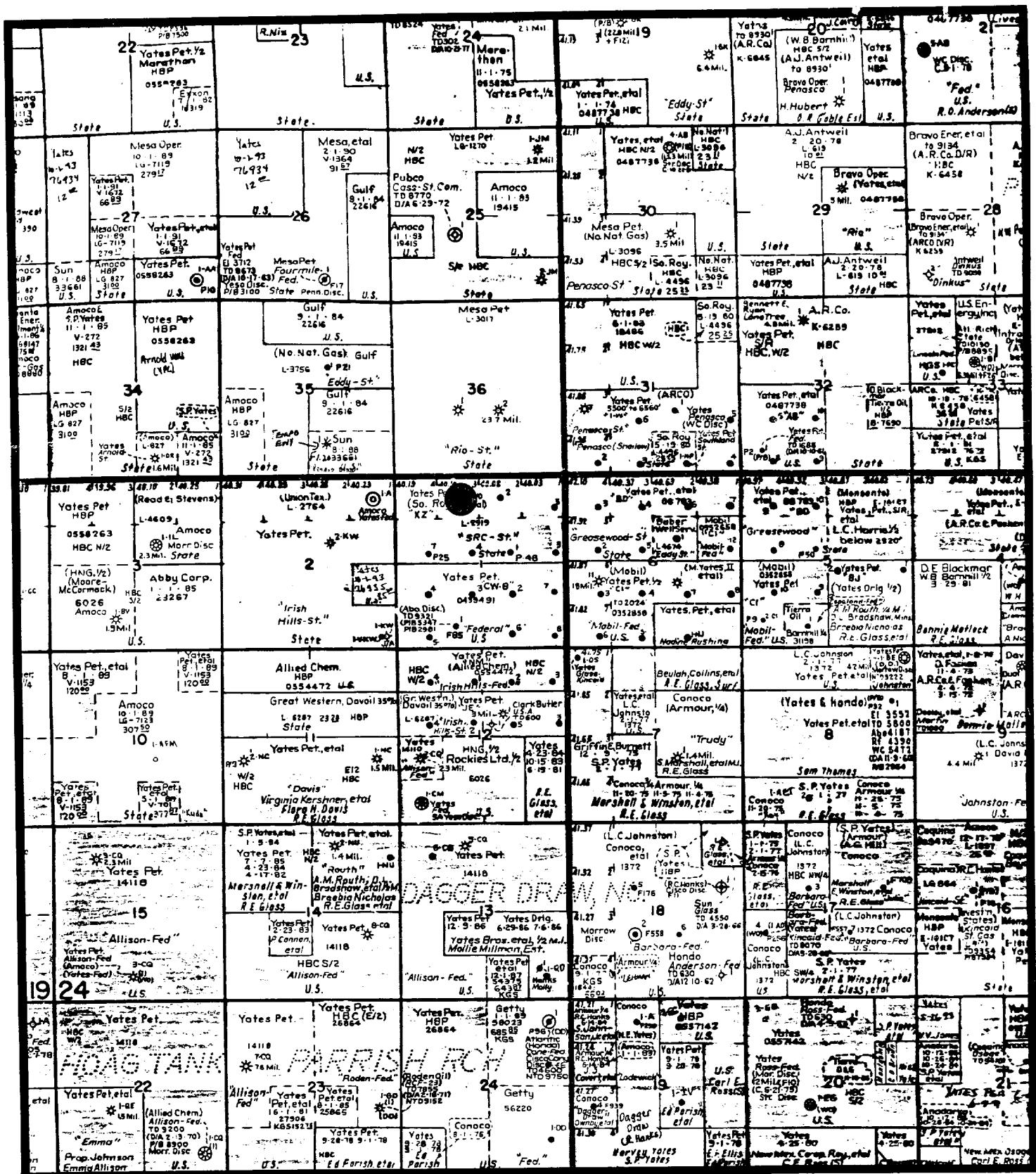
Yates Petroleum Corporation
Eddie M. Mahfood
Senior Engineer

cc: Tempo Energy
400 N. Big Spring
Ste #109
Midland, TX 79705

Amoco Production Co.
P.O. Box 3092
Houston, TX 77253

Mesa Limited Partnership
P.O. Box 2009
Amarillo, TX 79189-2009

Chevron USA, Inc.
P.O. Box 1150
Midland, TX 79702



YATES PETROLEUM CORPORATION

SRC "KZ" STATE NO. 6

T19S-R24E SEC.1

1980' FWL & 660' FNL

EDDY CO., N.M.

APPLICATION FOR DOWN-HOLE COMMINGLING

PENASCO DRAW-PENASCO PENN GAS

PENASCO DRAW-MORROW GAS

Submit 2 copies to Appropriate District Office.

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator Yates Petroleum Corporation		Pool Penasco Draw Permo Penn		County Eddy										
Address 105 S. Fourth, Artesia, New Mexico 88210		TYPE OF TEST - (X)		Completion ☐ Special ☒										
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.	
		U	S	T						R	WATER BBL'S.	GRAV. OIL		OIL BBL'S.
SRZ KZ State	6	c	1	19	24	2-24-88	F	12/64	250	0	24	0	0	302

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Eddie M. Mahfood
Signature

Eddie M. Mahfood-Senior Engineer
Printed name and title

3-17-89 505-748-1471

Date Telephone No.

Submit 2 copies to Appropriate
District Office.

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P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
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DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-1116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator Yates Petroleum Corporation		Pool Penasco Draw Morrow		County Eddy										
Address 105 S. Fourth, Artesia, New Mexico 88210		TYPE OF TEST - (X)		SCHEDULED ☐ COMPLETION ☐ SPECIAL ☒										
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO	
		U	S	T						R	WATER BBL'S.	GRAV. OIL	OIL BBL'S.	GAS M.C.F.
SRC KZ State	6	C	1	19	24	3-5-89	F 12/64	250	0	24	0	0	0	14

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

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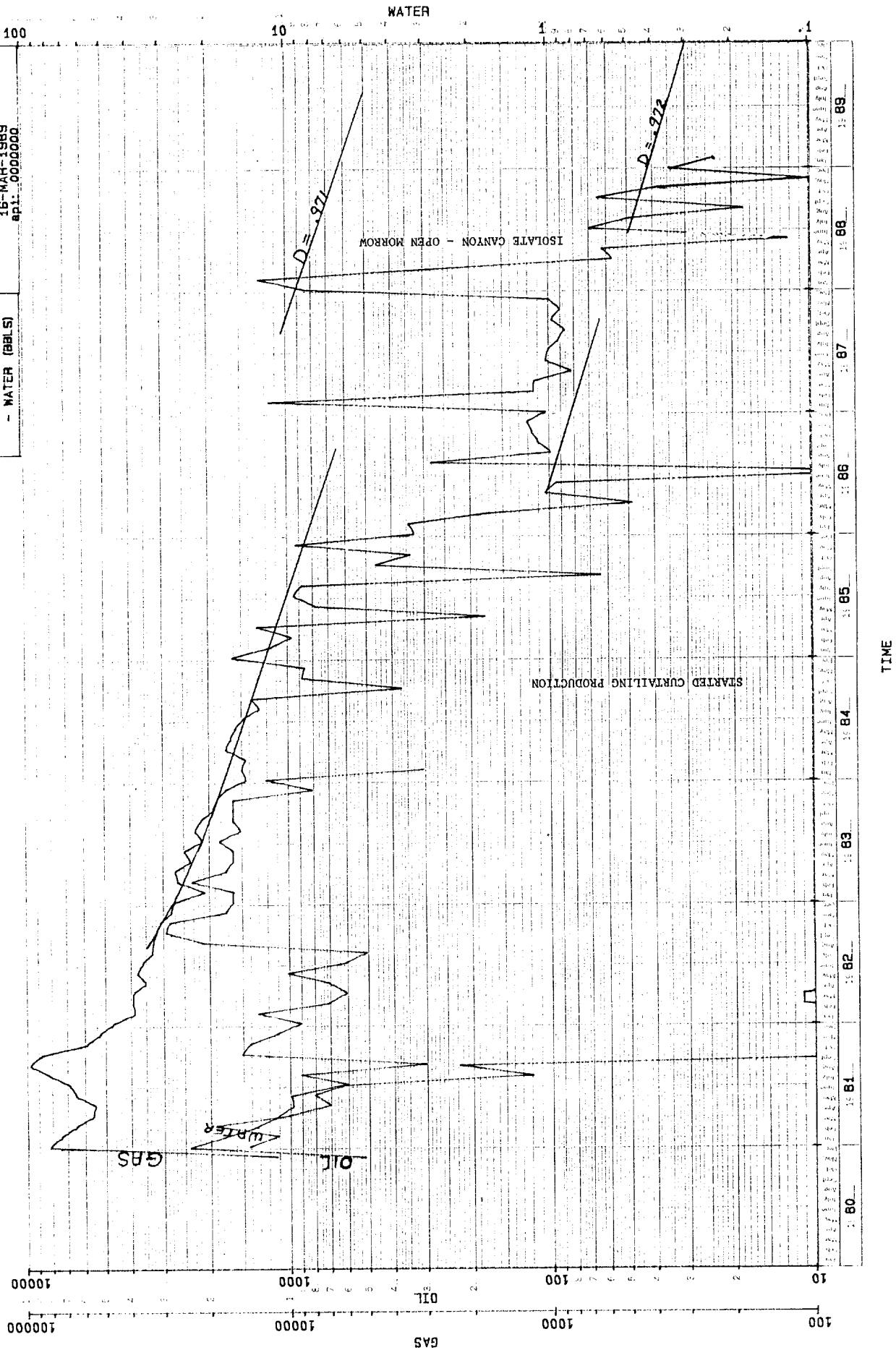
Eddie M. Mahfood - Senior Engineer
Printed name and title

3-17-89 505-748-1471

Date Telephone No.

- OIL (BBLs)
 - GAS (MCF)
 - WATER (BBLs)

SRC KZ STATE -6
 1C 195 24E
 16-MAR-1989
 API: 0000000



TIME

MASON

DATE: 5-4-88

PANY VATES PET. CORP. NAME SRC, KZ ST, #6	PREPARED FOR MR. APPLE	FIELD PENASCO	COUNTY Eddy	STATE N.M.
ACTUAL MEASUREMENT	DESCRIPTION		TOTAL DEPTH.	
15.00	K. B.		15.00	
7380.18	2 3/8" BRD J-55 Tubing 238 JTS			
5.50	BAKER SNAP-SET PACKER 4 1/2"		7395.18 7400.68	
PERFS	7468.73 & 7491-93			
7309.67	4 V JTS 2 3/8" J-55 Tubing			
2.60	BAKER SLIDING SLEEVE 2 3/8" X 1.875"		8710.35 8712.95	
30.00	1 JT 2 3/8" N-80 Tubing			
1.00	GUILD L'OO/OFF TOOL FULL BORE		8744.95 8745.95	
.93	BAKER 1.81" F' NIPPLE w/STANDING VALVE		8746.88	
5.96	GUILD UNIT 4 1/2" 11.6#		8752.84	
2.63	PACKER ACTUATED VENT ASSEMBLY		8755.47	
PERFS:	8788-91 10 HOLES			

5-4-88 - Blowed well down, loaded tubing & ANNULAS, UNSET PKR & R.B.P., Pulled out OF HOLE, Went BACK IN HOLE WITH TUBING & RET. HEAD, UNSET AND R.B.P. & Pulled OUT OF HOLE, Went BACK WITH NEW RETRIEVING HEAD, SLIDING SLEEVE & SNAP-SET PACKER, LATCHED ONTO LOWER PACKER, SLACKED OFF & SET UPPER PACKER, TEST ANNULAS TO 1000 P.S.I. & FLANGED UP.

SRC "KZ" State #6

Formula for Reserves:

$$Q \left(\frac{D^n - 1}{D - 1} \right) = \text{Remaining Reserves}$$

Where $Q \times D^n = \text{Economic Limit (370 MCF/Mo.)}$

$Q = \text{MCF per month}$

$D = \text{Decline Factor}$

$n = \text{Months of production to economic limit}$

$$\text{Canyon Reserves} = 7900 \left(\frac{.971^{104} - 1}{.971 - 1} \right) = 259 \text{ MMCF}$$

$$\text{Commingled Canyon} = 7900 \left(\frac{.971^{105} - 1}{.971 - 1} \right) = 260 \text{ MMCF}$$

$$\text{Commingled Morrow} = 381 \left(\frac{.972^{105} - 1}{.972 - 1} \right) = 13 \text{ MMCF}$$