

S. P. YATES PRESIDENT MARTIN YATES, III VICE PRESIDENT JOHN A. YATES VICE PRESIDENT B. W. HARPER SEC.-TREAS.

207 SOUTH FOURTH STREET ARTESIA. NEW MEXICO 88210 TELEPHONE (505) 748-1331

January 27

JAN 28 1982 OIL CONSERVATION DIVISION SANTA FE

Mr. Joe D. Ramey, Director New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Dear Sir:

Subject well was recompleted to the Atoka formation on October 19, 1981, in accordance with correspondence from our Mr. Ray Stall and your response of October 1. The well came in flowing 4.4 MMCFPD and depleted rapidly. By December 28, cumulative production was 96.2 MMCF with a BHP of 925 psi, and remaining recoverable reserves was 49.6 MMCF. At this rapid rate of decline it is estimated that some 30.3 MMCF would be produced by February 1, 1982, at which time the Atoka pressure and Morrow pressure would be about equal allowing the Morrow to overcome the back pressure on the standing valve and to flow commingled.

Under the provisions of Rule 303-C as amended by NMOCD Order R-6882, administrative approval is hereby applied for, to permit the downhole commingling of the Burton Flats Atoka and the Burton Flats Morrow in our Stonewall EP State Com No. 4.

The following criteria are satisfied:

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Re: Downhole Commingling, Stonewall EP State Com #4, Burton Flats Atoka & Morrow, Unit H, Sec. 30-20S-28E

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> Burton Flats-Atoka - 19.3 MM or 1.2% (gas), 100% (oil) Burton Flats-Morrow - 136.4 MM or 98.8% (gas), -0- (oil)

Offset operators are notified of this intent by copy of this letter.

Since the Morrow completion loads up with a small quantity of formation water, we are a little anxious to proceed with the commingling while there is energy in the Atoka to help keep the Morrow unloaded. Thank you.

Yours truly,

YATES PETROLEUM CORPORATION

Eddie M. Mahfood Petroleum Engineer

EMM:jg

enclosures

cc: Division Production Manager, Gulf Oil Exploration & Production Co., Box 1150, Midland, TX 79702 Division Production Manager, Exxon Company, Box 1600, Midland, TX 79701 Operations Manager, Mesa Petroleum Co., 1000 Vaughn Bldg., Midland, TX 79701

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GAS-OIL RATIO TESTS	NEW MEXICO OIL CONSERVATION COMMISSION
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	, Report casing pressure in flow of tubing pressure for any well producing through casing. 	No well will be assigned an allowable greater than the amount of oil produced on the official test. 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 focated by more than 15 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 Commission. Cas volumes must be reported in MCF measured at a pressure base of 15.025 psis and a temperature of 60° F. Specific gravity base will be 0.60.		•	•		<u>Burton Flats-Morrow</u> Stonewall <u>FP</u> State Com	<u>Burton Flats-Atoka</u> Stonewall EP State Com	LEASE NAME		207 South 4th, Artesia,	Yates Petroleum Corporation
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Stonewall EP State Com #4 H-30-201-28= Calculations of Remaining Reserves Morrow pfs 11136-181 Cumulative production to 2-1-82: 1222, 375 mcf gas + 2718 BO. Original BHP (7/78)P=4235 puis BHT=167°F, P=673.5 T=365.5 Z=0.935 Last BHP (9-30-81) R = 639 prig Z = 0.941 Abandonment BHP, P = 300 priz, Z = 0.972 Remaining Reserves = Np (P1/2, - Pa/2) (P - P) 1222375 702.2 313.2 1941 - 1972 1941 - 1972 1941 - 1972 136 4 Mmet atokapts 10553-575 Cumulative production to 1-1-32 = 96226 mel + BO Cumulative production 11-3-31 to 12-2881=63379 mcf+ 130 Original BHP (10-19-81) = 2301 puis, BHT = 162°F P= 691 T= 370 Z= 75 M. SIBHP 11-3-81, P= 1657 ping, Z= 0.872 126 hr SIBHP 12-23-81 P= 925 prig, Z = 0.918 P= 689 prig, Z = 0.937 Abandonment pressure Pa= 300 prig. Za= 0.970 Remaining Reserves = Np (P2/22 - Py2a) (P2 - P2) = 63379 - 1918 - 970 - 49.6 Mmcf. 1670-2 - 970 - 49.6 Mmcf. 1670-2 - 938-2 -972 - 913 When Atoka pres = Morrow pres = 689 psig, remaining res = 63379 -918 -2 7022 -918 -937 -1670-2 938-2 1670-2 938-2 19:3 mmcl Suggested allocation of Remaining Reserves: or Future Production: Burton Flats Atoka 19.3 mm/155.7 = 1.22 Burton Flats Morrow 136.4 mm/155.7 = 98.8%



## BENMETT-CATHEY WIRE LIN SERVICE P. O. BOX 787 ARTESIA, NEW MEXICO 88210

Phone 746-3281

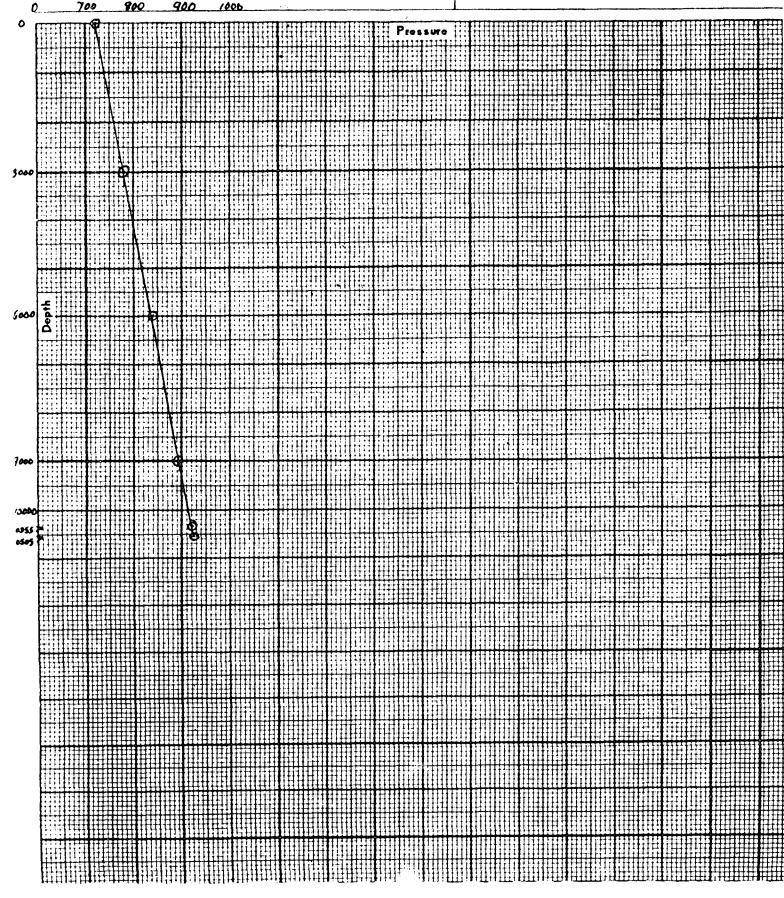
## **BOTTOM HOLE PRESSURE SURVEY REPORT**

LEASE  STONEWALL "EP"    WELL NO.  4    POOL  FORMATION    DATE  12-28-81  TIME _1    STATUS  SHUT IN  TEST DEPTH 1    TIME S.I.  0700 HOURSLAST TEST DAT    DATE  S.I.  12-23-81    BHP LAST TEST  TUB. PRES.  720LBS.    BHP CHANGE  ELE.  FLUID TOP    DATUM PLANE  WATER TOP	343 HOURS 0,505 FEET TE81
POOL  FORMATION    DATE  12-28-81  TIME  1    STATUS  SHUT  IN  TEST DEPTH  1    TIME S.I.  0700  HOURSLAST TEST DAT    QATE  S.1.  12-23-81  BHP LAST TEST    TUB.  PRES.  720LBS.  BHP CHANGE    ELE.  FLUID TOP     DATUM PLANE WATER TOP	343 HOURS 0,505 FEET TE
DATE <u>12-28-81</u> TIME <u>1</u> STATUS <u>SHUT IN</u> TEST DEPTH <u>1</u> TIME S.I. <u>0700 HOURS</u> LAST TEST DAT QATE S.I. <u>12-23-81</u> BHP LAST TES TUB. PRES. <u>720LBS</u> . BHP CHANGE ELE. <u>FLUID TOP</u> DATUM PLANE <u>WATER TOP</u>	343 HOURS 0,505 FEET TE
TIME S.I.  0700 HOURSLAST TEST DAT    DATE S.I.  12-23-81 BHP LAST TES    TUB. PRES.  720LBS. BHP CHANGE    ELE.  FLUID TOP    DATUM PLANE  WATER TOP	E <u>11-3-81</u>
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DATE "S.I., <u>12-23-81</u> BHP LAST TES" TUB. PRES. <u>720LBS</u> . BHP CHANGE ELEFLUID TOP DATUM PLANEWATER TOP '	- (
TUB. PRESBHP CHANGE ELEFLUID TOP DATUM PLANEWATER TOP `	r 1,654 LBS.
ELEFLUID TOP DATUM PLANEWATER TOP `_	
DATUM PLANEWATER TOP	
DATUM PSIA 937LBS RUN BY	OB HERREN
TEMP 184° PRESSURE RAN	
CLOCK NO	
ELEMENT NO. RPG3# 36641	

DEPTH	PRESSURE	GRADIENT
0	720	
3,000	780	2.0
6,000	840	2.0
9,000	893	1.8
10,355	921	2.1
10,505	924	2.0
10 536	925	

TIME B.H.P. MEASURED 1343 HOURS

LENGTH OF TIME WELL SHUT IN 126 HRS. 43



WELL NO 4.  FORMATION  ATOKA  1274    POOL		OPERATO	STON	EWAL	s pr		)LEL	M		·	·	PRI	ES	SU	RE	S		VE		RE	-	RT Essi				G
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BENETT-CATHEY WIRE LINE SERVICE P. O. BOX 787 ARTESIA, NEW MEXICO 88210 Phone 746-3281

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## BOTTOM HOLE PRESSURE SURVEY REPORT

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> Re: Downhole Commingling, Stonewall EP State Com #4, Burton Flats Atoka & Morrow, Unit H, Sec. 30-20S-28E

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alleyer , C. F. Kalteyer By:

Chief Proration Engineer Gulf Oil Corporation



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- The bottomhole pressure of each zone are about equal to 689 psig with very minimal reserves left in the Atoka zone thereby rendering separation of the zones uneconomical;
- 2) The Atoka zone will not cross-flow into the Morrow zone;
- 3) Both zones are fluid-sensitive, but the fluids from each of the zones to be commingled are akin and will not damage the other;
- 4) Ownership of the two zones are identical.

OIL CONSERVATION SANTA FE DIVISION

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January 27, 1982

Mr. Joe D. Ramey, Director New Mexico Oil Conservation Division

> Burton Flats-Atoka - 19.3 MM or 1.2% (gas), 100% (oil) Burton Flats-Morrow - 136.4 MM or 98.8% (gas), -0- (oil)

Offset operators are notified of this intent by copy of this letter.

Since the Morrow completion loads up with a small quantity of formation water, we are a little anxious to proceed with the commingling while there is energy in the Atoka to help keep the Morrow unloaded. Thank you.

Yours truly,

YATES PETROLEUM CORPORATION

Eddie M. Mahfood Petroleum Engineer

EMM:jg enclosures

cc: Division Production Manager, Gulf Oil Exploration & Production Co., Box 1150, Midland, TX 79702 Division Production Manager, Exxon Company, Box 1600, Midland, TX 79701

Operations Manager, Mesa Petroleum Co., 1000 Vaughn Bldg., Midland, TX 79701

Objection to downhole commingling of the Burton Flats-Atoka and Burton Flats-Morrow in Yates Petroleum Corporation's Stonewall EP State No. 4 is hereby waived.

By: J.K. Jufle for Epton Comp. 3-9-82