

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPLE AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form O-122

C/51

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 10/25/1999																																																																																																
Company YATES PETROLEUM CORPORATION		Connection AMOCO PIPELINE COMPANY																																																																																																
Pool INDIAN BASIN		Formation Frdan Basin UPPER PENN																																																																																																
Completion Date 10/22/1999	Total Depth 9760	Plug Back TD 9717	Elevation 3378																																																																																															
Csg. Size 9.265	Wt. 36.000	d 8.921	Set At 7265																																																																																															
Tbg. Size 2.875	Wt. 6.500	d 2.441	Set At 7265																																																																																															
Type Well Single		Packer Set At 7265																																																																																																
Producing Thru Tubing		Baro. Press. - Pa 13.2																																																																																																
Resv. Temp. °F 135 @ 7225		Mean Temp. °F 62																																																																																																
L 9760	H 9760	Gg 0.661	%CO ₂ 2.445																																																																																															
		%N ₂ 0.817	%H ₂ S 0.000																																																																																															
		Prover 0.000	Meter Run 4.000																																																																																															
		Taps Flange																																																																																																
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="6">FLOW DATA</th> <th colspan="2">TUBING DATA</th> <th colspan="2">CASING DATA</th> <th>Duration</th> </tr> <tr> <th>NO.</th> <th>Prover Line Size</th> <th>X</th> <th>Orifice Size</th> <th>Press. p.s.i.g.</th> <th>Diff. hw</th> <th>Temp. °F</th> <th>Press. p.s.i.g.</th> <th>Temp. °F</th> <th>Press. p.s.i.g.</th> <th>Temp. °F</th> <th>of Flow</th> </tr> <tr> <td>Sl.</td> <td>0.000</td> <td>x</td> <td>0.000</td> <td>0</td> <td>0.0</td> <td>0</td> <td>480</td> <td>0</td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>1.</td> <td>4.026</td> <td>x</td> <td>2.200</td> <td>450</td> <td>2.0</td> <td>60</td> <td>460</td> <td>60</td> <td></td> <td></td> <td>24</td> </tr> <tr> <td>2.</td> <td>4.026</td> <td>x</td> <td>2.200</td> <td>450</td> <td>2.5</td> <td>60</td> <td>457</td> <td>60</td> <td></td> <td></td> <td>24</td> </tr> <tr> <td>3.</td> <td>4.026</td> <td>x</td> <td>2.200</td> <td>450</td> <td>3.0</td> <td>60</td> <td>453</td> <td>60</td> <td></td> <td></td> <td>24</td> </tr> <tr> <td>4.</td> <td>4.026</td> <td>x</td> <td>2.200</td> <td>450</td> <td>3.5</td> <td>60</td> <td>450</td> <td>60</td> <td></td> <td></td> <td>24</td> </tr> <tr> <td>5.</td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				FLOW DATA						TUBING DATA		CASING DATA		Duration	NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	of Flow	Sl.	0.000	x	0.000	0	0.0	0	480	0			0	1.	4.026	x	2.200	450	2.0	60	460	60			24	2.	4.026	x	2.200	450	2.5	60	457	60			24	3.	4.026	x	2.200	450	3.0	60	453	60			24	4.	4.026	x	2.200	450	3.5	60	450	60			24	5.		x									
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Sl.	0.000	x	0.000	0	0.0	0	480	0			0																																																																																							
1.	4.026	x	2.200	450	2.0	60	460	60			24																																																																																							
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3.	4.026	x	2.200	450	3.0	60	453	60			24																																																																																							
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5.		x																																																																																																
RATE OF FLOW CALCULATIONS																																																																																																		
NO.	Coefficient (24 Hour)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd																																																																																											
1.	22.600	30.4	463.2	1.0000	1.230	1.046	885																																																																																											
2.	22.600	34.0	463.2	1.0000	1.230	1.046	989																																																																																											
3.	22.600	37.3	463.2	1.0000	1.230	1.046	1084																																																																																											
4.	22.600	40.3	463.2	1.0000	1.230	1.046	1171																																																																																											
5.																																																																																																		
NO.	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.																																																																																												
1.	0.68	520	1.41	0.914	0	0.000																																																																																												
2.	0.68	520	1.41	0.914	A.P.I. Gravity of Liquid Hydrocarbons	Deg.																																																																																												
3.	0.68	520	1.41	0.914	Specific Gravity Separator Gas	0.661																																																																																												
4.	0.68	520	1.41	0.914	Specific Gravity Flowing Fluid	XXXXXXXXXX																																																																																												
5.					Critical Pressure	679	P.S.I.A.																																																																																											
					Critical Temperature	370	°R																																																																																											
						679	P.S.I.A.																																																																																											
						370	°R																																																																																											
Pc	493.2	Pc ²	243.2																																																																																															
NO.	P _w	P _w ²	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 18.614$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 15.258$																																																																																												
1.	223.9	482.1	232.5	10.8																																																																																														
2.	221.1	481.4	231.8	11.5																																																																																														
3.	217.3	479.8	230.2	13.1																																																																																														
4.	214.6	479.1	229.5	13.7																																																																																														
5.																																																																																																		
Absolute Open Flow				16537	Mcf/d @ 15.025	Angle of Slope θ	43																																																																																											
						Slope, n	0.932																																																																																											
Remarks:																																																																																																		
Approved By Commission:		Conducted By:		Calculated By:		Checked By:																																																																																												
		LEEROY RICHARDS		MYKOL RENO		PINSON MCWHORTER																																																																																												

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w) C-122D

DATE 10/25/1999

COMPANY YATES PETROLEUM CORPORATION LEASE ZINGARO ANG FEDERAL WELL NO. 4

LOCATION: Unit F Section 1 Township 22S Range 23E

L 9760 H 9760 L/H 1.000 G 0.661 %CO₂ 2.445 %N₂ 0.817 %H₂S 0.000

d 2.441 Fr 0.010495 GH 6451.4 Pcr 679.1 Tcr 369.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.885	0.989	1.084	1.171	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	595	595	595	595	
4 T = (Tw+Ts) / 2	557.2	557.2	557.2	557.2	
5 Z (Est.)	0.922	0.922	0.923	0.923	
6 TZ	513.8	513.9	514.2	514.3	
7 GH / TZ	12.557	12.553	12.547	12.544	
8 e ^s (Table XIV)	1.601	1.601	1.601	1.601	
9 1-e ^s (Table XIV)	0.376	0.375	0.375	0.375	
10 Pt	473.2	470.2	466.2	463.2	
11 Pt ² / 1000	223.9	221.1	217.3	214.6	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	5.392	5.394	5.396	5.398	
14 FcQm	4.77	5.34	5.85	6.32	
15 L / H(FcQm) ²	22.8	28.5	34.2	39.9	
16 Fw = L / H(FcQm) ² (1-e ^s)	8.55	10.69	12.84	14.98	
17 Pw ² = Pt ² +Fw	232.5	231.8	230.2	229.5	
18 Ps ² = e ^s Pw ²	372.3	371.1	368.5	367.4	
19 Ps	610.2	609.2	607.0	606.1	
20 P = (Pt+Ps) / 2	541.7	539.7	536.6	534.7	
21 Pr = (P / Pcr)	0.80	0.79	0.79	0.79	
22 Tr = (T / Tcr)	1.51	1.51	1.51	1.51	
23 Z (Table XI)	0.922	0.922	0.923	0.923	

Company
Well
Location
10⁴³

YATES PETROLEUM CORPORATION
ZINGARO ANG FEDERAL #4
F 1-22S-23E

County
Date

EDDY
10-25-1993

Q, Mcfd

10⁴²

PC-LPW

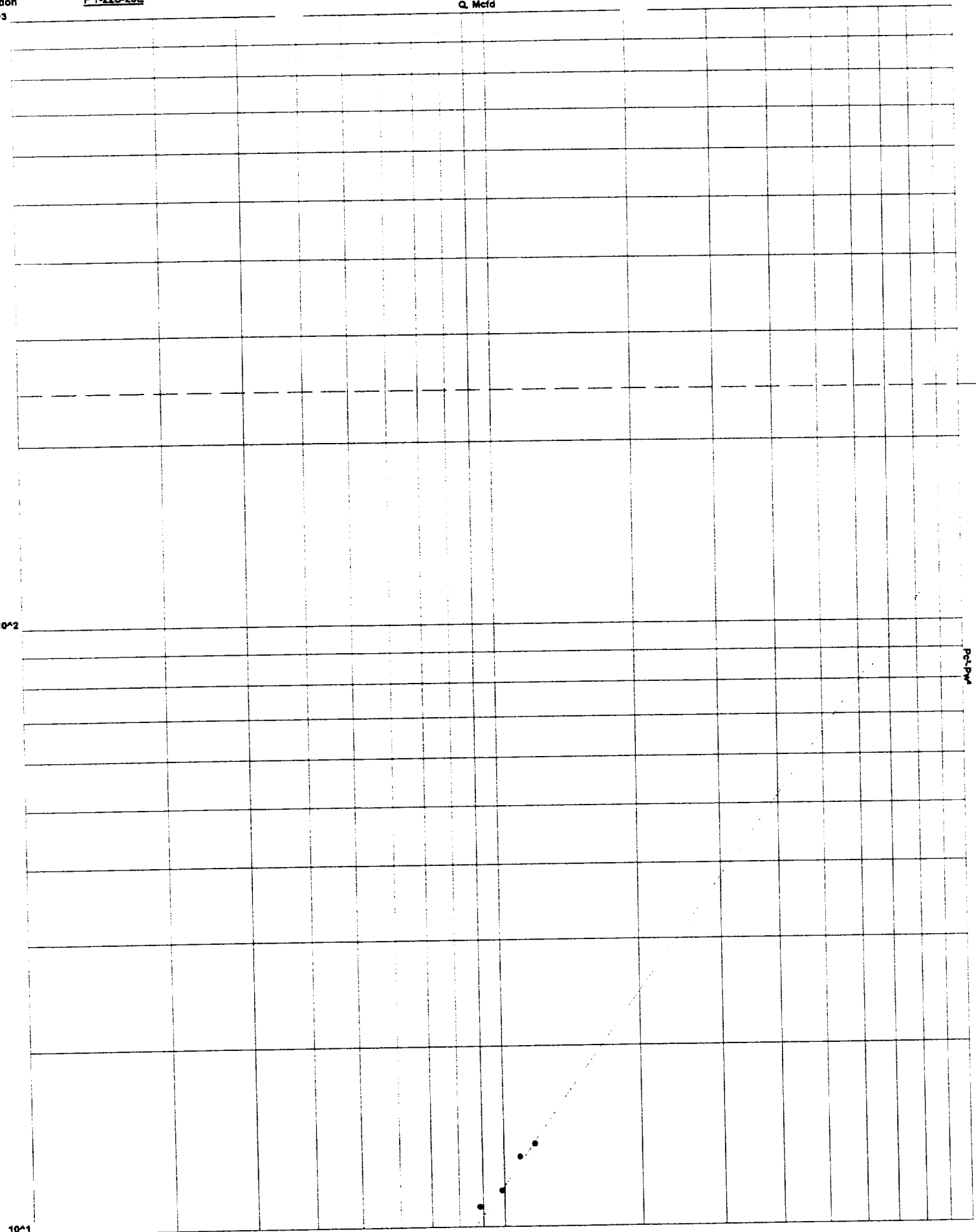
10⁴¹

10⁴²

10⁴³

10⁴⁴

AOF = 16637



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See reverse side for instructions)

Budget Bureau No. 1004-013/
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. REVR. ☐ Other _____

2. NAME OF OPERATOR

YATES PETROLEUM CORPORATION (505) 748-1471

3. ADDRESS OF OPERATOR

105 South 4th St., Artesia, NM 88210

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 1500' FNL & 1550' FWL (Unit F, SENW)

At top prod. interval reported below

At total depth

14. PERMIT NO.

DATE ISSUED

API 30-015-30550

5. LEASE DESIGNATION AND SERIAL NO.

NM-92742

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Zingaro ANG Federal

9. WELL NO.

4

10. FIELD AND POOL, OR WILDCAT

Indian Basin Upper Penn

11. SEC. T. R. M. OR BLOCK AND SURVEY OR AREA (Pre 648)

Section 1-T22S-R23E

12. COUNTY OR PARISH

Eddy

13. STATE

NM

15. DATE SPUDDED

RH 8-20-99

RT 8-26-99

16. DATE T.D. REACHED

9-26-99

17. DATE COMPL. (Ready to prod.)

10-22-99

18. ELEVATIONS (DV, MNB, RT, GR, ETC.)*

3378' GR

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD

9760'

21. PLUG, BACK T.D., MD & TVD

9717'

22. IF MULTIPLE COMPL. HOW MANY*

23. INTERVALS DRILLED BY

40-9760'

ROTARY TOOLS

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

7400-7448' (Canyon)

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

CNL/LDC & Laterolog

27. WAS WELL CORRED

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"		40'	26"	Cement to surface	
9-5/8"	36#	1598'	14-3/4"	2218 sx - circulate	
7"	26#	9760'	8-3/4"	1400 sx	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	7460'	

31. PERFORATION RECORD (Interval, size and number)

7400-7448' w/21 .42" holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
7400-7448'	Acidized w/3000 gals 20% Dagger
Draw HCL acid &	ball sealers. Re-acidized with
35000 gals 20% Dagger	Draw gelled HCL acid.

33. PRODUCTION

33.°		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)					WELL STATUS (Producing or shut-in)	
DATE FIRST PRODUCTION		Pumping					Producing	
10-22-99								
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO	
11-8-99	24		→	0	3833	2612		
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BSL.	GAS—MCF.	WATER—BSL.	OIL GRAVITY-API (CORR.)		
		→	0	3833	2612			

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold - connected to Dagger Draw Gas Processing

TEST WITNESSED BY

LeeRoy Richards

35. LIST OF ATTACHMENTS

Deviation survey & logs

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

Rusty Kline

TITLE Operations Technician

DATE Nov. 18, 1999

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.