NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 9-1-65

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

NOV

Type Test: [XX] Initial [ ] Annual [ ] Special			Test Date: 10/23/82	
Company: Yates Petroleum Corporation	Connection: Transwestern Pipeline			Unit
Pool: Pecos Slope - Abo Gas	Formation: Abo			
Completion Date: 4/27/82	Total Depth: 4180'	Plug Back TD: 4059'	Elevation: 3863' GL	Farm or Lease Name: Everette "OO" Federal
Csg. Size: 4 1/2" / Wt.: 9.5# / d: 4.090 / Set At: 4152"		Perforations: From 3660 To 3841		Well No.: 5
Tbg. Size: 2 3/8" / Wt.: 4.7# / d: 1.995 / Set At: 3630'		Perforations: From To		Unit: P / Sec.: 25 / Twp.: 5S / Rge.: 24E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 3630'		County: Chaves
Producing Thru: Tubing	Reservoir Temp. °F: 98° @ 3751	Mean Annual Temp. °F: 62	Baro. Press. – P_a: 13.2 psi	State: New Mexico
L: 3630' / H: 3630' / Gg: .659	% CO_2: 0.57	% N_2: 7.72	% H_2S: 0	Prover: -- / Meter Run: 2" / Taps: Flanged

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					921				
1.	2.067 x 1.250	195	23.6	72	871	62			24 hr.
2.	2.067 x 1.250	180	30.5	72	860	62			24 hr.
3.	2.067 x 1.250	160	50.1	72	844	62			24 hr.
4.	2.067 x 1.250	150	82.0	72	810	62			24 hr.
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	8.120	70.1	208.2	.9887	1.232	1.017	705
2.	8.120	76.7	193.2	.9887	1.232	1.017	772
3.	8.120	93.2	173.2	.9887	1.232	1.017	937
4.	8.120	115.7	163.2	.9887	1.232	1.017	1164
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.32	532	1.50	.967
2.	.29	532	1.50	.967
3.	.26	532	1.50	.967
4.	.25	532	1.50	.967
5.				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: -- Deg.
Specific Gravity Separator Gas: .659 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .659
Critical Pressure: 660 P.S.I.A. 660 P.S.I.A.
Critical Temperature: 355 R 355 R

P_c 934.2 P_c^2 872.7

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	781.8		788.2	84.5
2	762.5		770.1	102.6
3	734.8		746.1	126.6
4	677.7		695.1	177.6
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.914$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.019$

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3514$

Absolute Open Flow: 3514 Mcfd @ 15.025 Angle of Slope θ: Slope, n: .694

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	David Weaver	Andie Alderson	

COMPANY ____________ LEASE ____________ WELL NO. ____________ DATE ____________

LOCATION: Unit ____________ Section ____________ Township ____________ Range ____________

L ________ H ________ L/H ________ G ________ % CO_2 ________ % N_2 ________ % H_2S ________

d ________ F_r ________ GH ________ P_{cr} ________ (TABLE IX & X) T_{cr} ________ (TABLE IX & X)

LINE										
1 Q_m										
2 T_w (W.H. °R)										
3 T_s (B.H. °R)										
4 $T = \frac{(T_w + T_s)}{2}$										
5 Z (Est.)										
6 TZ										
7 GH/TZ										
8 e^s (Table XIV)										
9 $1 - e^{-s}$ (Table XIV)										
10 P_t										
11 $P_t^2/1000$										
12 F_r (Table XV)										
13 $F_c = F_r TZ$										
14 $F_c Q_m$										
15 $L/H (F_c Q_m)^2$										
16 $F_w = L/H(F_c Q_m)^2(1-e^{-s})$										
17 $P_w^2 = P_t^2 + F_w$										
18 $P_s^2 = e^s P_w^2$										
19 P_s										
20 $P = \frac{(P_t + P_s)}{2}$										
21 $P_r = P/P_{cr}$										
22 $T_r = T/T_{cr}$										
23 Z (Table XI)										