NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-78

RECEIVED

JUN 11 1982

O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 12-16-82	
Company: Yates Petroleum Corporation	Connection: Transwestern			Unit
Pool: Pecos Slope	Formation: Abo			
Completion Date: 10-20-81	Total Depth: 4300'	Plug Back TD: 4209	Elevation: 3853.1	Farm or Lease Name: Plains ON Com
Csg. Size: 4½ / Wt.: 9.5 / d: 4.090 / Set At: 4298		Perforations: From 3710 To 3743		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.995 / Set At: 3712		Perforations: From --- To ---		Unit: 0 / Sec.: 1 / Twp.: 5S / Rge.: 24E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: -----		County: Chaves
Producing Thru: Tubing	Reservoir Temp. °F: 90° @ 3,726	Mean Annual Temp. °F: 62°	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
3712	3712	.660	1.58	6.40	0	---	2"	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					980				
1.	2.067 x .875	240	28.5	58	870	65			24 hrs.
2.	2.067 x .875	245	43.6	58	820	65			24 hrs.
3.	2.067 x .875	250	82.5	58	780	65			24 hrs.
4.	2.067 x .875	290	75.7	58	690	65			24 hrs.
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	3.729	84.9	253.2	1.002	1.231	1.023	400
2	3.729	106.2	258.2	1.002	1.231	1.024	500
3	3.729	146.5	260.2	1.002	1.231	1.024	690
4	3.729	151.5	303.2	1.002	1.231	1.027	715
5							

NO.	P_t	Temp. °R	T_r	Z
1	.38	518	1.45	.955
2	.39	518	1.45	.954
3	.40	518	1.45	.953
4	.45	518	1.45	.948
5				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hyarocarbons: ____ Deg.
Specific Gravity Separator Gas: .660 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 667 P.S.I.A. 667 P.S.I.A.
Critical Temperature: 358 R 358 R

P_c 993.2 P_c^2 986.4

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	784.2		786.4	200.0
2	697.2		701.2	285.2
3	630.2		636.4	350.0
4	494.2		501.0	485.4
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.032$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.595$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1140 mcf

Absolute Open Flow: 1140 Mcfd @ 15.025 Angle of Slope θ: ____ Slope, n: .658

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	David Weaver	Brent Mulliniks	Al Springer

COMPANY Yates Petr Corp LEASE Plains Gr Com WELL NO. 1 DATE 6-10-82

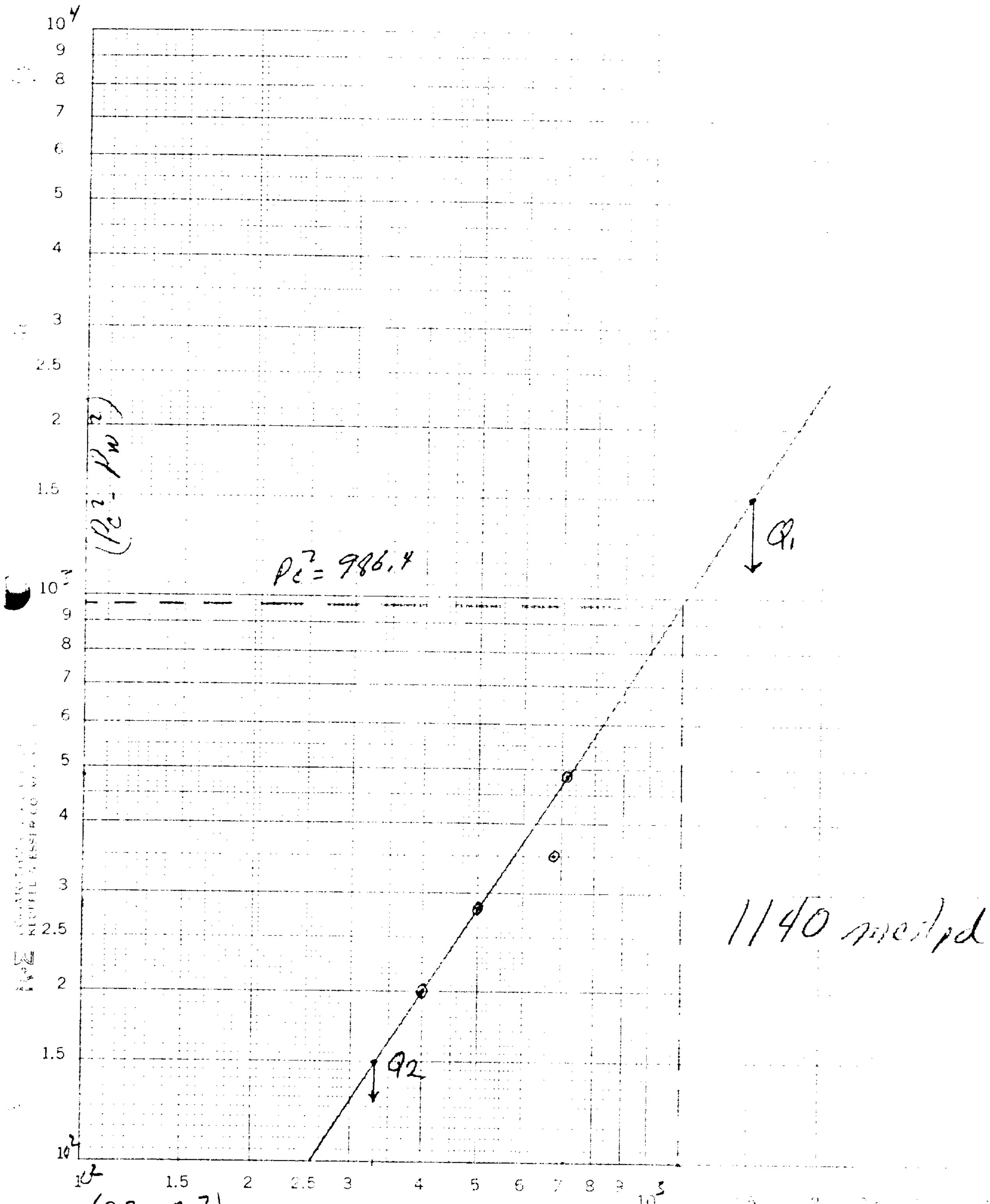
LOCATION: Unit O Section 1 Township 5S Range 24E

L 3712 H 3712 L/H 1.000 G .660 % CO_2 1.58 % N_2 6.40 % H_2S —

d 1.995 F_r .01823 GH 2450 P_{cr} 667 (TABLE IX & X) T_{cr} 358 (TABLE IX & X)

	LINE	Rate 4		Rate 3		Rate 2		Rate 1			
	1 Q_m	.715		.690		.500		.400			
	2 T_w (W.H. °R)	525		525		525		525			
	3 T_s (B.H. °R)	550		550		550		550			
6	4 $T = (\frac{T_w + T_s}{2})$	537.5		537.5		537.5		537.5			
	5 Z (Est.)	.892		.880		.874		.868			
9	6 TZ	499.45		473.0		469.8		466.5			
	7 GH/TZ	5.110		5.180		5.215		5.251			
	8 e^s (Table XIV)	1.211		1.214		[illegible]		1.218			
	9 $1-e^{-s}$ (Table XIV)	.174		.176		[illegible]		.179			
19	10 P_t	703.0		793.8		835.4		885.6			
24	11 $P_t^2/1000$	494.2		630.2		697.2		784.2			
	12 F_r (Table XV)	.01823		.01823		[illegible]		[illegible]			
32	13 $F_c = F_r TZ$	[illegible]		8.623		9.564		8.505			
34	14 $F_c Q_m$	6.249		5.950		[illegible]		3.402			
35	15 $L/H (F_c Q_m)^2$	39.055		35.379		[illegible]		11.555			
37	16 $F_w = L/H (F_c Q_m)^2 (1-e^{-s})$	6.795		[illegible]		5.264		[illegible]			
40	17 $P_w^2 = P_t^2 + F_w$	501.0		636.4		701.2		786.4			
42	18 $P_s^2 = e^s P_w^2$	606.7		772.5		852.7		955.9			
44	19 P_s	778.9		[illegible]		923.4		977.7			
49	20 $P = (\frac{P_t + P_s}{2})$	741.		[illegible]		935.4		932.2			
	21 $P_r = (P/P_{cr})$	1.1		1.25		1.32		1.40			
	22 $T_r = (T/T_{cr})$	[illegible]		1.50		1.50		[illegible]			
	23 Z (Table XI)	[illegible]		.940		[illegible]		.866			

PLAINS OIL COM #1
O-1-5S-29E
Chaves, New Mexico
Yates Petr Corp



$(P_c^2 - P_w^2)_1 = 1{,}500$
$(P_c^2 - P_w)_2 = 150$
$Q_1 = 1{,}500$
$Q_2 = 330$

$\log Q_1 = 3.17609$
$\log Q_2 = 2.51851$