STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

RECEIVED
JAN 11 1982
O. C. D.
ARTESIA, OFFICE

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

O/SF C-122

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 12-4-81	
Company: Yates Petroleum Corporation		Connection: Transwestern Pipeline Co.			Unit: L-6274
Pool: ~~Undesignated Abo~~ Pecos Slope - Abo Gas		Formation: Abo			
Completion Date: 10-27-81	Total Depth: 4500'	Plug Back TD: 4473'	Elevation: 3763' GR	Farm or Lease Name: Dee OQ State	
Csg. Size: 4-1/2" / Wt.: 9.5# / d: 4.090" / Set At: 4497'		Perforations: From 3723' To 3999'		Well No.: 2	
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: 1.995 / Set At: 3975'		Perforations: From --- To ---		Unit: P / Sec.: 32 / Twp.: 5S / Rge.: 25E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: None		County: Chaves	
Producing Thru: Tubing	Reservoir Temp. °F: 93 @ 4000	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: New Mexico	
L: 3975' / H: 3975'	Gg: 0.660	% CO_2: 1.48	% N_2: 6.40	% H_2S: 0	Prover: --- / Meter Run: 4" / Taps: Flange

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					989				days
1.	4.026 x 1.375	345	10	58	750	62			24 hrs
2.	4.026 x 1.375	355	24	58	625	62			24 hrs
3.	4.026 x 1.375	340	30	60	565	64			24 hrs
4.	4.026 x 1.375	325	44	58	500	66			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	9.071	60.56	358.2	1.002	1.231	1.033	700
2	9.071	94.00	368.2	1.002	1.231	1.033	1086
3	9.071	102.94	353.2	1.000	1.231	1.033	1190
4	9.071	121.99	338.2	1.002	1.231	1.033	1410
5							

NO.	P_t	Temp. °R	T_r	Z
1	.539	518	1.447	0.938
2	.554	518	1.447	0.938
3	.531	520	1.453	0.938
4	.509	518	1.447	0.938
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas 0.660 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 665 P.S.I.A. _____ P.S.I.A.
Critical Temperature 358 R _____ R

P_c 1,002.2 P_c^2 1004.4

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	500.1		589.4	412.8
2	407.3		424.1	578.1
3	334.3		354.8	647.4
4	263.4		292.5	709.7
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.9694$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.9365$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1800$

Absolute Open Flow 1800 Mcfd @ 15.025 Angle of Slope θ _____ Slope, n 0.9751

Remarks: Static pressures by Bennett Wireline. Flowing pressures by DWT calculations.
Worksheet C122D attached

Approved By Division	Conducted By:	Calculated By:	Checked By:
	David Weaver	Albert R. Stall	

WORKSHEET FOR CALCULATION OF ST[illegible]C COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Adopted 9-1-65

COMPANY Yates Petroleum Corp LEASE Dee OQ State WELL NO. 2 DATE 1-11-82

LOCATION: Unit P Section 32 Township 5S Range 25E

L 3975 H 3975 L/H 1 G 0.660 % CO_2 1.48 % N_2 6.40 % H_2S 0

d 1.995 F_r .018231 GH 2624 P_{cr} 665 (TABLE IX & X) T_{cr} 358 (TABLE IX & X)

	1ST RATE		2ND RATE		3RD RATE		4TH RATE			
LINE	1ST TRIAL	2ND TRIAL	1ST TRIAL	2ND TRIAL	1ST TRIAL	2ND TRIAL	1ST TRIAL	2ND TRIAL		
1 Q_m	0.700	0.700	1.086	1.086	1.190	1.190	1.410	1.410		
2 T_w (W.H. °R)	522	522	522	522	524	524	526	526		
3 T_s (B.H. °R)	553	553	553	553	553	553	553	553		
4 $\bar{T} = (\frac{T_w + T_s}{2})$	537.5	537.5	537.5	537.5	538.5	538.5	539.5	539.5		
5 $\bar{Z}$ Est.)	0.875	0.883	0.920	0.899	0.910	0.908	0.916	0.917		
6 TZ	470.3	474.6	494.5	483.2	490.0	489.0	494.2	494.7		
7 GH/TZ	5.579	5.529	5.306	5.430	5.355	5.367	5.310	5.304		
8 e^s (Table XIV)	1.233	1.230	1.220	1.226	1.222	1.223	1.220	1.220		
9 $1-e^{-s}$ (Table XIV)	0.189	0.187	0.180	0.184	0.182	0.182	0.180	0.180		
10 P_t	763.2	763.2	638.2	638.2	578.2	578.2	513.2	513.2		
11 $P_t^{2}/1000$	582.5	582.5	407.3	407.3	334.3	334.3	263.4	263.4		
12 F_r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 $F_c = F_r TZ$	8.574	8.653	9.015	8.809	8.933	8.915	9.010	9.019		
14 $F_c Q_m$	6.001	6.057	9.790	9.567	10.63	10.61	12.70	12.72		
15 $L/H (F_c Q_m)^2$	36.002	36.688	95.850	91.524	113.007	112.548	161.386	161.712		
16 $F_w = L/H(F_c Q_m)^2(1-e^{-s})$	6.808	6.861	17.253	16.840	20.567	20.484	29.049	29.108		
17 $P_w^2 = P_t^2 + F_w$	589.28	589.36	424.55	424.14	354.87	354.78	292.45	292.51		
18 $P_s^2 = e^s P_w^2$	726.59	724.91	517.95	520.00	433.65	433.90	356.79	356.86		
19 P_s	852.40	851.42	719.69	721.11	658.52	658.71	597.32	597.38		
20 $P = (\frac{P_t + P_s}{2})$	807.80	807.31	678.95	679.65	618.36	618.46	555.26	555.29		
21 $P_r = (P/P_{cr})$	1.2147	1.2140	1.0210	1.0220	0.9299	0.9300	0.8350	0.8350		
22 $T_r = (T/T_{cr})$	1.5014	1.5014	1.5014	1.5014	1.5042	1.5042	1.5070	1.5070		
23 Z (Table XI)	0.883	0.883	0.899	0.899	0.908	0.908	0.917	0.917		

YATES PETROLEUM CORP.
Dee OQ State No. 2
Unit P Sec. 32, T. 55., R. 25E.