

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR G. WELL

Form C-122

CLSF file

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 08/07/1994	
Company Yates Petroleum Corp		Connection Transwestern Pipeline Co	
Pool Abo		Unit Pecos Slope	
Completion Date 07/24/1994	Total Depth 4200	Plug Back TD 4155	Elevation 3679
Csg. Size 4.500		Wt 10.500	d 4.052
Tbg. Size 2.375		Wt 4.700	d 1.995
Type Well Single		Packer Set At 3606	
Producing Thru Tubing	Resv. Temp. °F 88 @ 3550	Mean Temp. °F 62	Baro. Press. - Pa 24.0
Farm or Lease Name Basil ANS Com		Well No. 1	
County Chaves		State New Mexico	
L 3604	H 3604	Gg 0.650	%CO ₂ 0.037
%N ₂ 5.095	%H ₂ S 0.000	Prover 0.000	Meter Run 2.000
			Taps Flange

FLOW DATA						TUBING DATA			CASING DATA		Duration of Flow
NO	Prover Line Size	X	Orifice Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	
1	0.000	x	0.000	0	0.0	0	580	0			0
2	2.067	x	1.125	140	6.0	106	400	62			24
3	2.067	x	1.125	130	9.3	103	313	62			24
4	2.067	x	1.125	140	13.0	105	227	62			24
5	2.067	x	1.125	140	15.0	105	140	62			24

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 Hour)	hwFm	Pressure Fm	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress Factor, Fpv	Rate of Flow Q, Mcfd
1	6.393	31.4	164.0	0.9585	1.240	1.011	241
2	6.393	37.8	154.1	0.9610	1.240	1.010	291
3	6.393	46.2	164.0	0.9593	1.240	1.011	355
4	6.393	49.6	164.0	0.9593	1.240	1.011	381

NO	Pr	Temp °R	Tr	Z	Gas Liquid Hydrocarbon Ratio 0	Mcf/bbl
1	0.25	566	1.58	0.979	A.P.I. Gravity of Liquid Hydrocarbons 0.000	Deg
2	0.23	563	1.57	0.980	Specific Gravity Separator Gas 0.650	XXXXXXXXXX
3	0.25	565	1.58	0.979	Specific Gravity Flowing Fluid XXXXXXXXXX	0.650
4	0.25	565	1.58	0.979	Critical Pressure 662	P.S.I.A. 662
5					Critical Temperature 358	°R 358

Pc	604.0	Pc'	364.8
NO	Pr	Pw	Fw'
1	179.8	424.9	180.5
2	113.6	338.6	114.7
3	63.0	254.3	64.6
4	26.9	169.8	28.8

$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.215$		$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.163$	
$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 413$			

Absolute Open Flow 413	Mcf @ 15.025	Angle of Slope 0 38	Slope, n 0.774
Remarks			

Approved By Commission	Conducted By David Weaver	Calculated By Andrea Carpenter	Checked By
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 08/07/1994

COMPANY Yates Petroleum Corp LEASE Basil ANS Com WELL NO. 1

LOCATION: Unit A Section 23 Township 7S Range 25E

L 3604 H 3604 L/H 1.000 G 0.650 %CO₂ 0.037 %N₂ 5.095 %H₂S 0.000

d 1.995 Fr 0.017777 GH 2344.0 Pcr 661.9 Tcr 358.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.241	0.291	0.355	0.381	
2 Tw(W.H.°R)	522	522	522	522	
3 Ts(B.H.°R)	548	548	548	548	
4 T = (Tw+Ts) / 2	534.7	534.7	534.7	534.7	
5 Z (Est.)	0.932	0.945	0.959	0.973	
6 TZ	498.2	505.5	512.7	520.1	
7 GH / TZ	4.705	4.637	4.572	4.507	
8 e ^{As} (Table XIV)	1.193	1.190	1.187	1.184	
9 1-e ^{As} (Table XIV)	0.162	0.160	0.158	0.155	
10 Pt	424.0	337.0	251.0	164.0	
11 Pt ² / 1000	179.8	113.6	63.0	26.9	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	8.856	8.985	9.115	9.246	
14 FcQm	2.13	2.62	3.23	3.52	
15 L / H(FcQm) ²	4.6	6.8	10.5	12.4	
16 Fw = L / H(FcQm) ² (1-e ^{As})	0.74	1.09	1.65	1.93	
17 Pw ² = Pt ² +Fw	180.5	114.7	64.6	28.8	
18 Ps ² = e ^{As} Pw ²	215.3	136.4	76.7	34.1	
19 Ps	464.0	369.4	277.0	184.8	
20 P = (Pt+Ps) / 2	444.0	353.2	264.0	174.4	
21 Pr = (P / Pcr)	0.67	0.53	0.40	0.26	
22 Tr = (T / Tcr)	1.49	1.49	1.49	1.49	
23 Z (Table XI)	0.932	0.945	0.959	0.973	

Company
Well
Location

Yates Petroleum Corp
Basil ANS Com #1
A 23-7S-25E

County
Date

Chaves
08-07-1994

Q, Mcfd

10³

P_o - P_{wf}

10²

10³

10⁴

ΔQF = 413

