

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

Form C-122D
Revised 1-78

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 1-9-81	
Company Yates Petroleum Corporation /		Connection Transwestern Pipeline Co.	
Pool Richard Knob Atoka Morrow		Formation Atoka & Morrow	
Completion Date 4-18-80		Total Depth 8440 KB	Plug Back To 7879 KB
Casing Size 4 1/2		Wt. 11.6#	d 4.000
Set At 8197 KB		Perforations: From 7790 To 7873	
Tub. Size 2 3/8"		Wt. 4.7#	d 1.995
Set At 7754 KB		Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single		Packer Set At 7754 KB	Well No. 2
Producing Thru tubing		Reservoir Temp. °F 138 @ 7831	Mean Annual Temp. °F 62
Baro. Press. - P _a 13.2		State N. Mex.	
L 7826	H 7826	G _g 0.683	% CO ₂ 1.21
% N ₂ 0.94		% H ₂ S N.7	Prover ---
Meter Run 2"		Taps Flanged	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							2230	55			Days
1.	2.067	X	0.500	400	14	45	1972	60			8 d
2.	2.067	X	0.500	400	30	45	1670	63			14 d
3.	2.067	X	0.500	390	53	45	1337	64			24 d
4.	2.067	X	0.500	400	81	45	779	65			24 d
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	1.189	76.06	413.2	1.015	1.232	1.0466	118
2	1.189	111.34	413.2	1.015	1.232	1.0466	173
3	1.189	146.18	403.2	1.015	1.232	1.0458	227
4	1.189	182.95	413.2	1.015	1.232	1.0466	285
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.613	505	1.361	.9130	1410	54	0.659	XXXXXX	674	371
2	0.613	505	1.361	.9130				XXXXXX		
3	0.601	505	1.361	.9143						
4	0.613	505	1.361	.9130						
5										

NO.	P _r ²	P _w ²	R _w ²	P _r ² - R _w ²
1			6401	1803
2			4559	3645
3			2881	5323
4			954	7250
5				

(1) $\frac{P_r^2}{P_r^2 - R_w^2} = \frac{1.1316}{}$

AOF = Q $\left[\frac{R_w^2}{P_r^2 - R_w^2} \right]^n = \frac{311}{}$

(2) $\left[\frac{R_w^2}{P_r^2 - R_w^2} \right]^n = \frac{1.09052}{}$

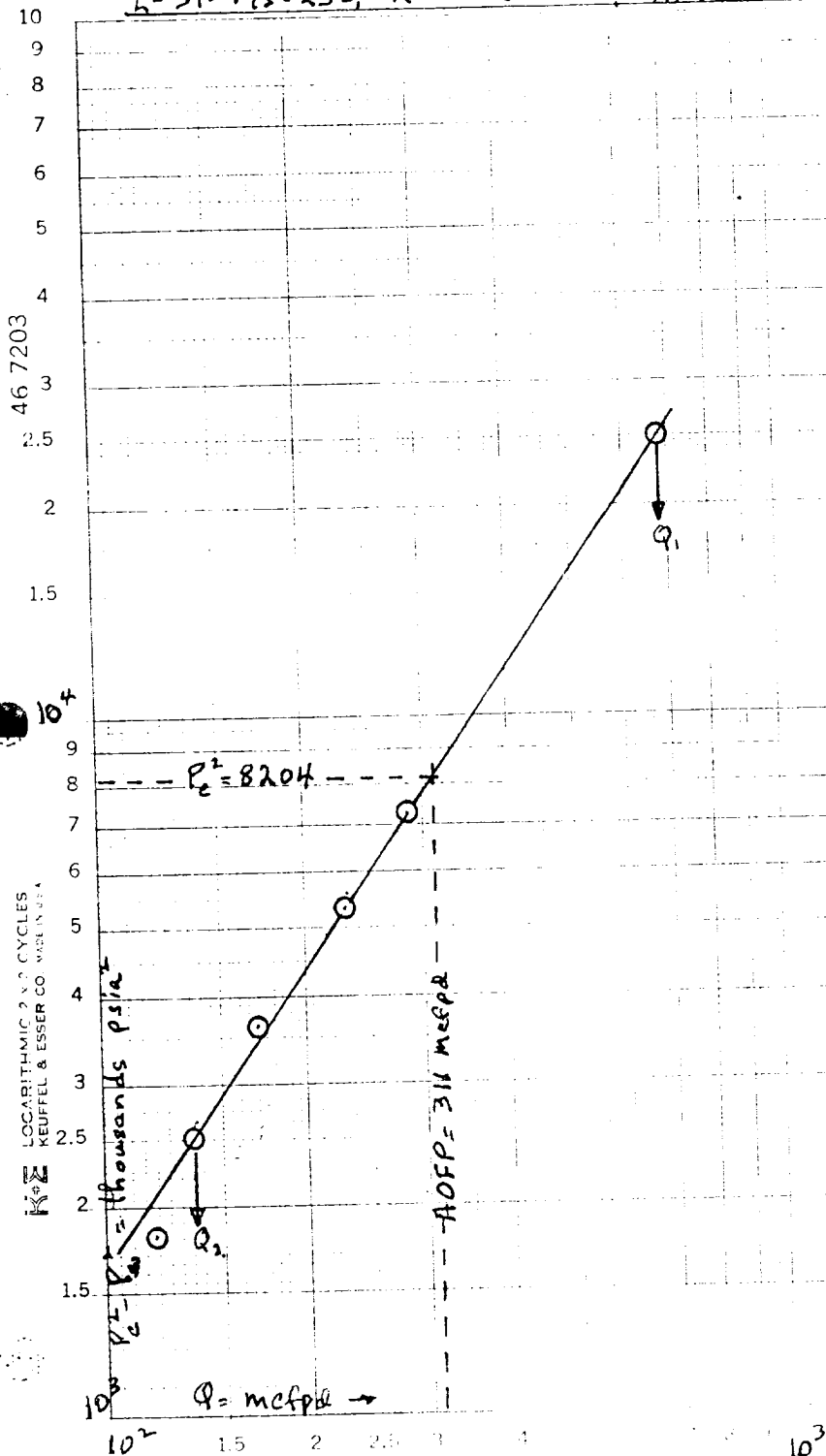
Absolute Open Flow	311	Mcf/d @ 15.025	Angle of Slope @	55 deg.	Slope, n	0.700
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Remarks: Static pressures by Bennett Wireline, flowline pressures by DWT calculations worksheet C122D attached.

Approved By Commission:	Conducted By: Hal Elless	Calculated By: Eddie Mahfood	Checked By:
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YPC - Federal EF Cam No. 2

L-31-175-25E, Richard Knob, Atoka Morrow, Eddy Co, N. Mex



$$Q_1 = 678 \text{ mcfpd}$$

$$Q_2 = 135 \text{ mcfpd}$$

$$\log Q_1 = 2.8312$$

$$\log Q_2 = 2.1303$$

$$n = 0.7204$$

COMPANY _____
 LEASE Subsurface E/F 1200
 WELL NO. 2
 DATE 1-2-51

LOCATION: Unit _____
 Section 31 Township 17S Range 25E

Height	Weight	HA	LAH	% CO ₂	% N ₂	% H ₂ S
73.5	92.6	1.00	6.623	1.21	0.24	0.1

Case No.	Date	Page	Page	Page
1745	1944	1	1	1
1746	1944	1	1	1
1747	1944	1	1	1
1748	1944	1	1	1
1749	1944	1	1	1
1750	1944	1	1	1
1751	1944	1	1	1
1752	1944	1	1	1
1753	1944	1	1	1
1754	1944	1	1	1
1755	1944	1	1	1
1756	1944	1	1	1
1757	1944	1	1	1
1758	1944	1	1	1
1759	1944	1	1	1
1760	1944	1	1	1
1761	1944	1	1	1
1762	1944	1	1	1
1763	1944	1	1	1
1764	1944	1	1	1
1765	1944	1	1	1
1766	1944	1	1	1
1767	1944	1	1	1
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1769	1944	1	1	1
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1773	1944	1	1	1
1774	1944	1	1	1
1775	1944	1	1	1
1776	1944	1	1	1
1777	1944	1	1	1
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1789	1944	1	1	1
1790	1944	1	1	1
1791	1944	1	1	1
1792	1944	1	1	1
1793	1944	1	1	1
1794	1944	1	1	1
1795	1944	1	1	1
1796	1944	1	1	1
1797	1944	1	1	1
1798	1944	1	1	1
1799	1944	1	1	1
1800	1944	1	1	1

TABLE 10.1	TABLE 10.2	TABLE 10.3
10.1	10.2	10.3
10.4	10.5	10.6
10.7	10.8	10.9
10.10	10.11	10.12
10.13	10.14	10.15
10.16	10.17	10.18
10.19	10.20	10.21
10.22	10.23	10.24
10.25	10.26	10.27
10.28	10.29	10.30
10.31	10.32	10.33
10.34	10.35	10.36
10.37	10.38	10.39
10.40	10.41	10.42
10.43	10.44	10.45
10.46	10.47	10.48
10.49	10.50	10.51
10.52	10.53	10.54
10.55	10.56	10.57
10.58	10.59	10.60
10.61	10.62	10.63
10.64	10.65	10.66
10.67	10.68	10.69
10.70	10.71	10.72
10.73	10.74	10.75
10.76	10.77	10.78
10.79	10.80	10.81
10.82	10.83	10.84
10.85	10.86	10.87
10.88	10.89	10.90
10.91	10.92	10.93
10.94	10.95	10.96
10.97	10.98	10.99
10.100	10.101	10.102
10.103	10.104	10.105
10.106	10.107	10.108
10.109	10.110	10.111
10.112	10.113	10.114
10.115	10.116	10.117
10.118	10.119	10.120
10.121	10.122	10.123
10.124	10.125	10.126
10.127	10.128	10.129
10.130	10.131	10.132
10.133	10.134	10.135
10.136	10.137	10.138
10.139	10.140	10.141
10.142	10.143	10.144
10.145	10.146	10.147
10.148	10.149	10.150
10.151	10.152	10.153
10.154	10.155	10.156
10.157	10.158	10.159
10.160	10.161	10.162
10.163	10.164	10.165
10.166	10.167	10.168
10.169	10.170	10.171
10.172	10.173	10.174
10.175	10.176	10.177
10.178	10.179	10.180
10.181	10.182	10.183
10.184	10.185	10.186
10.187	10.188	10.189
10.190	10.191	10.192
10.193	10.194	10.195
10.196	10.197	10.198
10.199	10.200	10.201
10.202	10.203	10.204
10.205	10.206	10.207
10.208	10.209	10.210
10.211	10.212	10.213
10.214	10.215	10.216
10.217	10.218	10.219
10.220	10.221	10.222
10.223	10.224	10.225
10.226	10.227	10.228
10.229	10.230	10.231
10.232	10.233	10.234
10.235	10.236	10.237
10.238	10.239	10.240
10.241	10.242	10.243
10.244	10.245	10.246
10.247	10.248	10.249
10.250	10.251	10.252
10.253	10.254	10.255
10.256	10.257	10.258
10.259	10.260	10.261
10.262	10.263	10.264
10.265	10.266	10.267
10.268	10.269	10.270
10.271	10.272	10.273
10.274	10.275	10.276
10.277	10.278	10.279
10.280	10.281	10.282
10.283	10.284	10.285
10.286	10.287	10.288
10.289		

LINE	1	2	3	4	5	6	7	8	9
1 Q _m	1118	173	0227	0285					4
2 T _m (W.H. 2R)	520	523	524	525					6 135
3 T _m (B.H. 2R)	521	526	527	528					
4 T _m (B.H. 2R)	522	527	528	529					3897
5 C (Est.)	704	705	706	707					6260
6 T _m	413-450	451-452	453-454	455-456					12117
7 GH/TZ	12438	12439	12440	12441					11322
8 e ^s (Table XIV)	1620	1621	1622	1623					51616
9 1-e ^s (Table XIV)	13243	13244	13245	13246					51617
10 F ₁	13247	13248	13249	13250					723
11 P ₁ 2/1033	13251	13252	13253	13254					623
12 F ₁ (Table X)	13255	13256	13257	13258					624
13 F ₂ = F ₁ T ₂	13259	13260	13261	13262					625
14 F ₃ Q _m	13263	13264	13265	13266					626
15 L H (F ₂ Q _m) ²	13267	13268	13269	13270					627
16 F ₁ = L/H (F ₂ Q _m) ² (1-0 ⁻²)	13271	13272	13273	13274					628
17 P ₁ 2 = P ₁ 2 + F ₁	13275	13276	13277	13278					629
18 F ₁ 2 = e ⁰ P ₁ 2	13279	13280	13281	13282					630
19 P ₂	13283	13284	13285	13286					631
20 P = (1 + F ₂)	13287	13288	13289	13290					632
21 P ₁ = (P P ₀)	13291	13292	13293	13294					633
22 T ₁ = (T T ₀)	13295	13296	13297	13298					634