

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5/28/80			
Company Getty Oil Company				Connection El Paso					
Pool Eumont-Yates				Formation Yates				Unit	
Completion Date 1-16-80		Total Depth 3950		Plug Back TD 3041		Elevation 3711 GL		Farm or Lease Name State AC	
Csg. Size 4 1/2	Wt. 9.5	d 3.965	Set At 3950	Perforations: From 2710 To 2982		Well No. 2			
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 2673	Perforations: From To		Unit Sec. Twp. Rge. E 5 19-S 37-E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At -		County Lea	
Producing Thru Tubing		Reservoir Temp. °F 95° @ 3041		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State NM	
L 2673	H 2673	Gg .7778	% CO ₂ .098	% N ₂ 31.871	% H ₂ S -	Prover	Meter Run 4"	Taps Flange	

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.	
SI										
1.	4" x 1.00	4/64	56	4	71		1410	80	1410	80
2.	4" x 1.00	5/64	58	10.8	71		1320	80	1320	80
3.	4" x 1.00	6/64	58	19.4	71		1295	81	1295	81
4.	4" x 1.00	8/64	60	57.76	72		1220	82	1220	82
5.							1040	83	1040	83

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	4.753	14.96	56	.9896	1.134	1.001	79.87
2	4.753	25.03	58	.9896	1.134	1.001	133.63
3	4.753	33.54	58	.9896	1.134	1.001	179.07
4	4.753	58.87	60	.9887	1.134	1.001	314.32
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.1	531	1.61	.998	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	.1	531	1.61	.998	Specific Gravity Separator Gas .7778 X X X X X X X X
3	.1	531	1.61	.998	Specific Gravity Flowing Fluid X X X X X
4	.1	532	1.61	.988	Critical Pressure 666 P.S.I.A. 614 P.S.I.A.
5.					Critical Temperature 415 R 330 R

P _c 1423.2 P _c ² 2025.5				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	1777		1777.07	248.43
2	1711		1711.21	314.29
3	1520		1520.38	505.12
4	1109		1110.19	915.31
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 4.01$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 718$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.01$$

Absolute Open Flow 718 _____ Mcfd @ 15.025	Angle of Slope θ _____	Slope, n 1.00
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Remarks: _____

Chrg. Signed by _____
 Approved By Commission: _____
 Dist. & Supp. _____

Conducted By: _____

Calculated By: _____

Checked By: _____

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)COMPANY Getty Oil Company LEASE State AC WELL NO. 2 DATE _____LOCATION: Unit 2673 Section 5 Township 19-S Range 37-EL 2673 H 2673 L/H 1.00 G .7778 % CO₂ .098 % N₂ 31.871 % H₂S 0d 1.995 F_r .018231 GH 2079 P_{CF} 614 T_{CF} 330
TABLE IX & X

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	P _{CF}	T _{CF}
1 Q_m	.079	.133	.179	.314		
2 T_w (W.H. °R)	531	531	531	532		
3 T_s (B.H. °R)	556	556	556	556		
4 $T = (\frac{T_w + T_s}{2})$	543	543	543	544		
5 Z (Est.)	.915	.920	.917	.922	.925	.933
6 TZ	496.85	499.56	497.93	500.65	503.2	507.55
7 GH/TZ	4.19	4.16	4.17	4.15	4.13	4.09
8 e^s (Table XIV)	1.170	1.169	1.169	1.168	1.168	1.166
9 $1-e^s$ (Table XIV)	.145	.145	.145	.144	.144	.142
10 P_t	1333.2	1308.2	1308.2	1233.2	1053.2	1053.2
11 $P_t^2/1000$	1777	1711	1711	1520	1109	1109
12 F_r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231
13 $F_c = F_r TZ$	9.06	9.11	9.077	9.13	9.17	9.25
14 $F_c Q_m$	.72	1.21	1.21	1.63	2.88	2.90
15 $L/H (F_c Q_m)^2$	.51	1.46	1.46	2.65	8.29	8.44
16 $F_w = L/H (F_c Q_m)^2 (1-e^s)$	.07	.211	.211	.382	1.19	1.19
17 $P_w^2 = P_t^2 + F_w$	177.07	1711.211	1711.211	1520.382	1110.19	1110.19
18 $P_s^2 = e^s P_w^2$	2079.17	2000.40	2000.40	1775.81	1296.7	1294.48
19 P_s	45.60	44.73	44.73	42.14	36.0	35.98
20 $P = (\frac{P_t + P_s}{2})$	689.40	676.46	676.46	637.67	544.6	544.6
21 $P_r = (P/P_{cr})$	1.12	1.10	1.10	1.03	.88	.88
22 $T_r = (T/T_{cr})$	1.645	1.645	1.645	1.645	1.648	1.648
23 Z (Table XI)	.915	.917	.921	.921	.933	.933