

File
122 Form C-122
Revised 9-1-65
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~~SEP 15 1980~~

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 7-14-80		O.C.D.	
Company Yates Petroleum Corp.		Connection Transwestern Pipeline Co.		ARTESIA, OFFICE	
Pool Pecos Slope - Abo Gas Wildcat Abo		Formation Abo		Unit NM 10263	
Completion Date 11-10-79		Total Depth 5144' KB	Plug Back TD 4065' KB	Elevation 3829' KB	Farm or Lease Name Thomas "LN" Fed
Csg. Size 5-1/2"	Wt. 14#	d 5.012	Set At 5144'	Perforations: From 3968 To 3990	Well No. 1
Tbg. Size 2-7/8"	Wt. 6.5#	d 2.441	Set At 3924	Perforations: To	Unit Sec. Twp. Rge. F 12 6S 25E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single			Packer Set At 3924' KB	County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 98 @ 3980	Mean Annual Temp. °F 62	Baro. Press. - P _a 13.2	State New Mexico
L 3974	H 3974	G _g 0.657	% CO ₂ 1.79	% N ₂ 4.84	% H ₂ S Nil
			Prover	Meter Run 2"	Taps Flange

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow Months
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							1020	94		
1.	2.067 x 0.875			680	14	95	981	85		
2.				680	26	95	950	86		
3.				680	48	95	895	87		
4.				680	91	95	775	88		
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	3.729	98.51	693.2	0.9680	1.234	1.0504	461
2.	3.729	134.25	693.2	0.9680	1.234	1.0504	628
3.	3.729	182.41	693.2	0.9680	1.234	1.0504	853
4.	3.729	251.16	693.2	0.9680	1.234	1.0504	1175
5.							

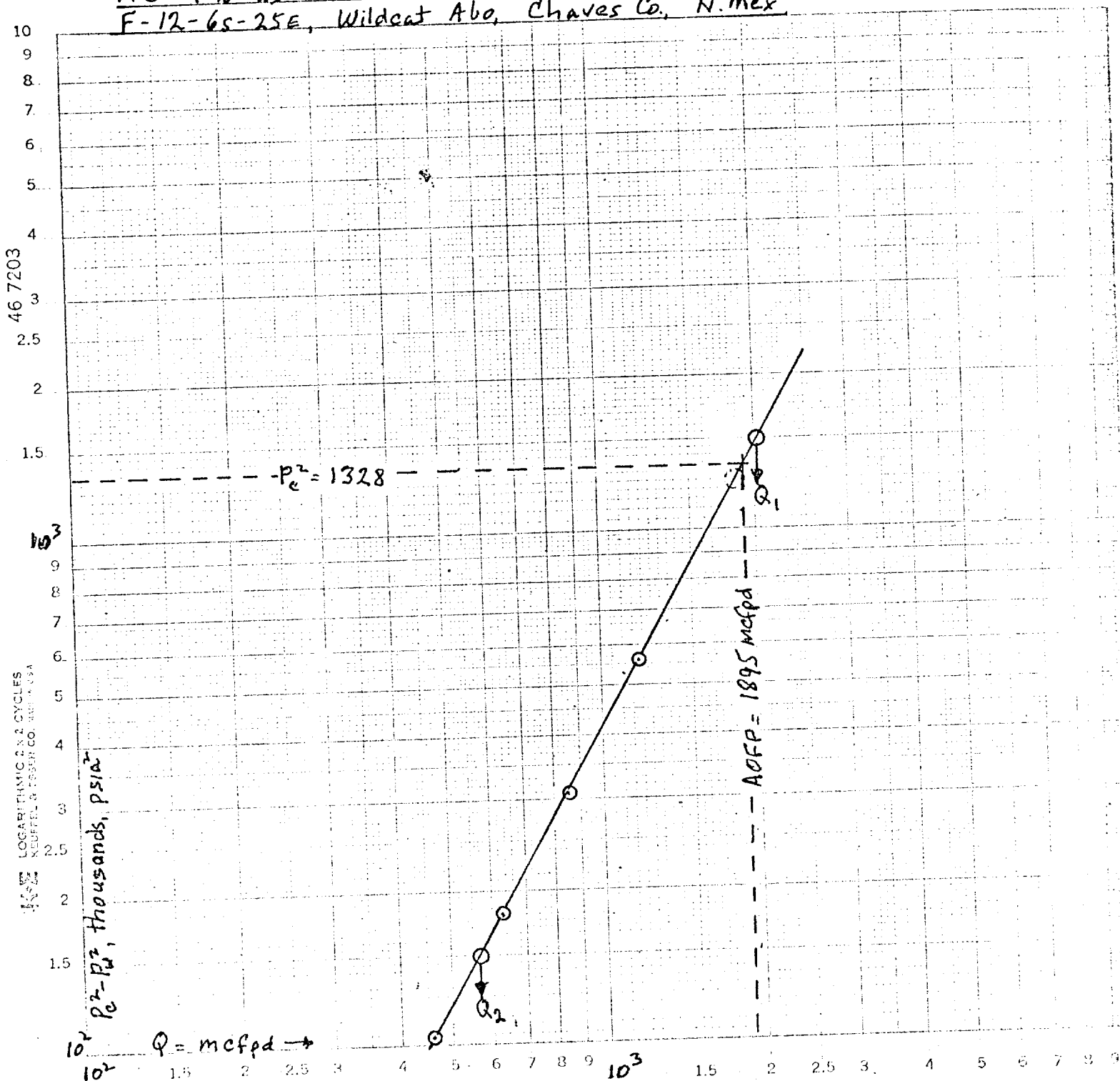
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	1.038	555	1.537	.9063		0.657	XXXXXX	XXXXX	668	361
2.	1.038	555	1.537	.9063						
3.	1.038	555	1.537	.9063						
4.	1.038	555	1.537	.9063						
5.										

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1			1225	103
2			1148	180
3			1021	307
4			769	559
5				

Absolute Open Flow = 1895 Mcfd @ 15.025 Angle of Slope = 61 degrees Slope, n = 0.5528
 Remarks: Static pressures by Bennett Wireline; flowing pressures by DWT. Calculations worksheet C-122D attached.

Approved By Consultant:	Conducted By: David Weaver	Calculated By: Eddie Mahfood	Checked By:
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YPC-Thomas LN Federal No. 1
F-12-6S-25E, Wildcat Abo, Chaves Co., N.Mex



$$Q_1 = 2025 \text{ mcfpd}$$

$$Q_2 = 567 \text{ mcfpd}$$

$$\log Q_1 = 3.3064$$

$$\log Q_2 = 2.7536$$

$$n = 0.5528$$

WORKSHEET FOR CALCULATION OF ST. IC COLUMN WELLHEAD PRESSURE (P.W)

COMPANY YPC LEASE Thomas LN Forested WELL NO. 1 DATE 7-14-80

LOCATION: Unit F Section 12 Township 6S Range 25E N:1

L 3974 H 3974 L/H 10000 G 0.657 % CO₂ 1.79 % N₂ 4.84 % H₂S 392

3922 (51958) = 3367 d 2.4919 F_r 1009359 GH 2611 P_{CT} 753 TABLE 12 & 13

5212512 = 1306

3974 (6.208) 24673

LINE	S1	1	2	3	4		
1 Q _m	—	0.461	0.628	0.853	1.175		
2 T _w (W.H. °R)	554	545	546	547	548		
3 T _s (B.H. °R)	558	558	558	557	557		
4 T = $(\frac{T_w + T_s}{2})$	547	551.5	552	552	552.5		
5 Z (Ess.)	.821	.8315	.837	.845	.8645		
6 T _Z	444.09	458.57	462.02	466.44	477.64		
7 GH/T _Z	5.8140	5.6938	5.6512	5.5977	5.4665		
8 e ^s (Table XIV)	1.2436	1.2380	1.2360	1.2336	1.2275		
9 1-e ^s (Table XIV)		0.1926	0.1910	0.1843	0.1853		
10 P _i	1033.2	994.2	963.2	908.2	788.2		
11 P _i 2/1000	1067.5	988.42	927.75	824.8	621.26		
12 E _i (Table XVI) $S_0 = 0.375 \frac{P_i}{T_i}$	0.21302	0.21352	0.21192	0.20991	0.20499		
13 F _c = F _i T _Z		4.2918	4.324	4.3654	4.4702		
14 F _c Q _m		1.9785	2.7155	3.7237	5.8525		
15 L/H (F _c Q _m) ²		3.9145	7.374	13.866	27.589		
16 F _w = L/H (F _c Q _m) ² (1-e ^s)		0.75	1.41	2.16	5.11		
17 P _w ² = P _i ² + F _w		989.18	929.16	827.14	626.137		
18 P _s ² = e ^s P _w ²	1322.6	1224.6	1148.4	1030.7	768.9		
19 P _s	1152.2	1106.6	1071.7	1010.3	876.8		
20 P = $(\frac{P_i + P_s}{2})$	1092.7	1050.4	1017.4	959.2	822.5		
21 P _i = (P/P _c)	1.457	1.395	1.351	1.274	1.1056		
22 T _i = (T/T _c)	1.205	1.1407	1.1403	1.1408	1.1409		
	1.891	0.8315	0.837	0.845	0.8645		