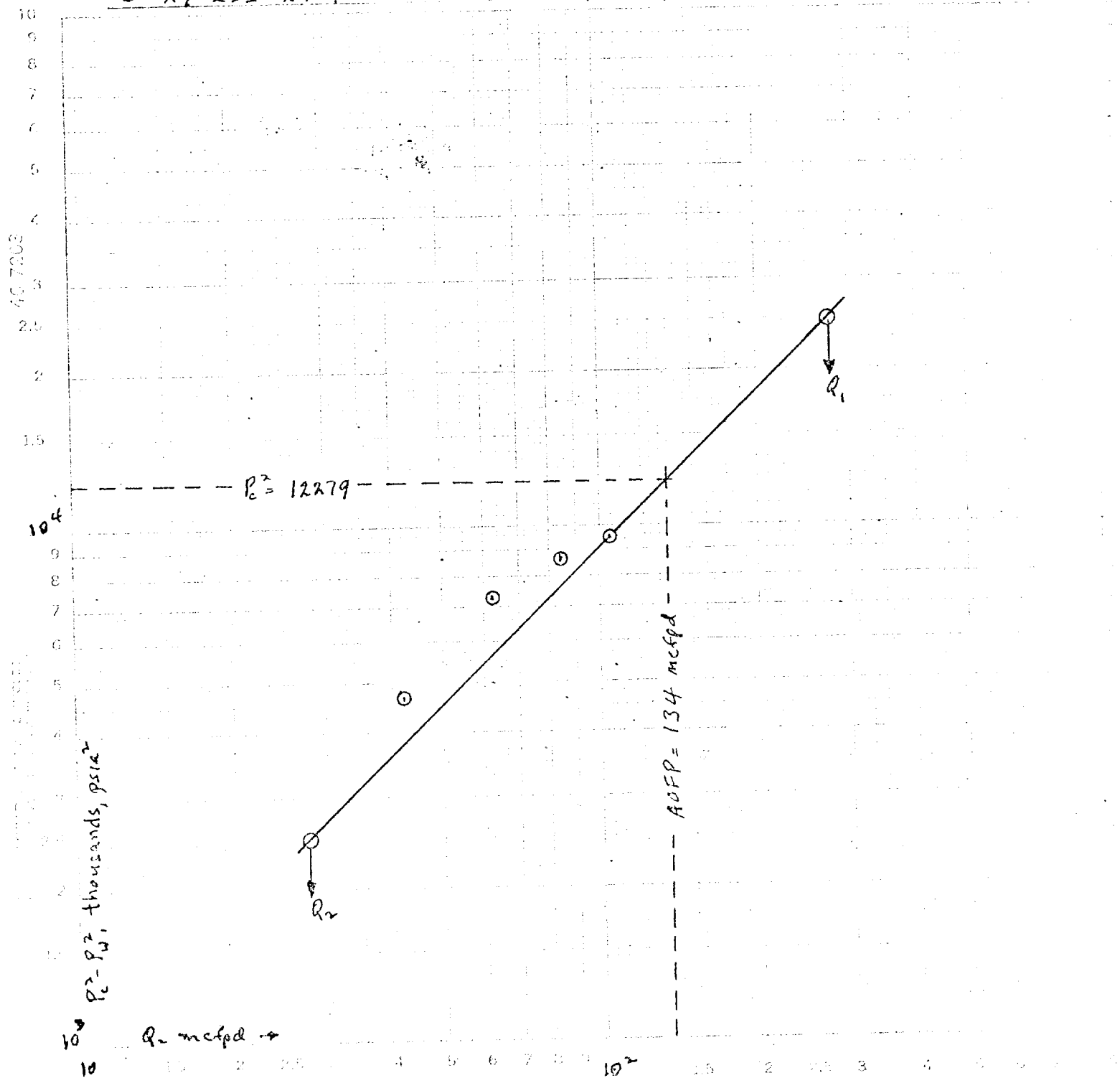


RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8-8-80		OCT 7 1980			
Company Yates Petroleum Corp. ✓			Connection El Paso Natural Gas Co.				
Pool Wildcat Morrow			Formation Morrow				
Completion Date 6-5-80		Total Depth 10400'		Plug Back TD 9868'			
				Elevation 3873' KB			
Csg. Size 4 1/2		ID 11.6#		Set At 9898' KB			
				Perforations: From 9733 To 9816			
Tub. Size 2-3/8		ID 4.7#		Set At 9717' KB			
				Perforations: To			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 9717' KB			
Producing Thru Tubing		Reservoir Temp. °F 164° 9775		Mean Annual Temp. °F 62			
				Baro. Press. - P _a 13.2			
L 9775		H 9775		G _g 0.587			
				% CO ₂ 0.63			
				% N ₂ 0.25			
				% H ₂ S Nil			
				Prover --			
				Meter Run 4"			
				Term Flanged			
FLOW DATA							
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w		
1.	4.026	x	0.375	436	5		
2.	"	"	"	436	11		
3.	"	"	"	436	20		
4.	"	"	"	436	31		
5.							
TUBING DATA							
				Press. p.s.i.g.	Temp. °F		
				2461	106		
				1842	107		
				1420	108		
				1160	109		
				945	110		
CASING DATA							
				Press. p.s.i.g.	Temp. °F		
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, Mscf/d
1.	0.6670	47.39	449.2	0.9813	1.305	1.032	42
2.	0.6670	70.29	449.2	0.9813	1.305	1.032	62
3.	0.6670	94.78	449.2	0.9813	1.305	1.032	84
4.	0.6670	118.01	449.2	0.9813	1.305	1.032	104
5.							
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.		
1.	0.666	540	1.538	0.939	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.		
2.	0.666	540	1.538	0.939	Specific Gravity Separator Gas _____ 0.587		
3.	0.666	540	1.538	0.939	Specific Gravity Flowing Fluid _____ 0.587		
4.	0.666	540	1.538	0.939	Critical Pressure _____ 674 P.S.I.A. 676 P.S.I.A.		
5.					Critical Temperature _____ 351 R 352 R		
P _c 3504.2 P _r 12279							
NO.	P _r	P _w	P _w	P _c - P _w	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2916$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2916$		
1.		2755	7590	4684			
2.		2241	5023	7256			
3.		1925	3706	8573			
4.		1665	2772	9507			
5.							
Absolute Open Flow 134					Angle of Slope α 45 Degrees		
Remarks: Static pressures by Bennett Wireline, flowing pressures by DWT. Calculations worksheet C-122D attached. Well unable to unload treating fluid against high back-pressure.					Slope, n 1.000		
Approved By: Consultant		Conducted By: David Weaver		Calculated By: Eddie Mahfood		Checked By:	

YPC- No. Crooked Creek 1G Fed Com. No. 1

J-22-23S-24E. Wildcat Morrow, Eddy Co, N. Mex



$$Q_1 = 275 \text{ mcfpd} \quad \log Q_1 = 2.4393$$

$$Q_2 = 27.5 \text{ mcfpd} \quad \log Q_2 = 1.4393$$

$$n = 1.0000$$

WORKSHEET FOR CALCULATION OF SI, IC COLUMN WELLHEAD PRESSURE (P_w)

COMPANY YPC

LOCATION: Unit J

L 23525 - 1200' H₂O H₂O 25

Section 27

L/H 1000

Township 23S

Range 24E

WELL NO. 1

DATE 8-2-80

C-122D
Adopted 9-1-65

d 22375 F₁ 0.018231 GH 5034 28525

G 0.589 % CO₂ 0.63 % N₂ 0.25 % H₂S 0.7

1200' H₂O - 524 psi 0.03 % H₂O

LINE	SI	1	2	3	4	P _{CI}	TABLE IX & X	T _{CI}	TABLE IX & X
1 O _m		0.012	0.062	0.084	0.104				
2 T _w (W.H. °R)		567	568	569	570				
3 T _s (B.H. °R)		623	623	624	620				
4 T = (T _w + T _s) / 2		595	595	595	595				
5 C (Btu)		0.2525	0.860	0.8775	0.894				
6 T ₂		507.27	511.70	522.113	531.93				
7 GH/TZ		9.9237	9.8378	9.6116	9.46365				
8 e ^s (Table XIV)		1.45035	1.11462	1.4356	1.74260				
9 1 - e ^s (Table XIV)			0.3085	0.3034	0.2987				
10 P ₁		2474.2	1855.2	1433.2	1173.2				
11 P ₂ / 1000		6121.7	3041.77	2654.66	1376.4				
12 F ₁ (Table XV)		0.37214	0.36892	0.36156	0.35489				
13 F ₂ = F ₁ / TZ			9.3288	9.5186	9.6976				
14 F ₃ C _H			0.392	0.5902	0.8166				
15 L/H (F ₃ Q _m) ²			0.1535	0.3483	0.6636				
16 F _w = L/H (F ₃ Q _m) ² (1-0.9)			0.05	0.11	0.2				
17 P _w ² = P ₁ ² + F _w			3441.82	2054.17	1376.6				
18 P _s ² = e ^s P _w ²			12881.6	4977.56	2948.92				
19 P _s = √(P _s ²)			2480.2	2231.0	1717.3				
20 P = (P ₁ + P _s) / 2			2727.2	2043.1	1575.2				
21 P ₁ = (P/P _{CI})			4.034	3.022	2.330				
22 T ₁ = (T/T _{CI})			1.690	1.690	1.690				
23 P ₁ (Table XI)			18515	0.860	0.894				