

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AT ONE POINT BACK PRESSURE TEST OR GAS WELL

Form C-122
 Revised 9-1-65

C15F

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 6/3/80		JUL 29 1980		
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Co.				O. C. D.	
Pool Richard Knob Atoka-Morrow				Formation Atoka				Unit ARTESIA, OFFICE	
Completion Date 4/10/80		Total Depth 8800 KB		Plug Back TD 8358 KB		Elevation 3680 KB		Farm or Lease Name Spearman KQ Federal	
Csg. Size 4 1/2"	Wt. 11.6#	d 4.000	Set At 8402 KB	Perforations: From 8148 To 8158				Well No. 1	
Tbg. Size 2-3/8"	Wt. 4.7#	d 1.993	Set At 8106 KB	Perforations: From To				Unit Sec. Twp. Rge. K 13 18S 24E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 8106 KB			County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 138 @ 8153		Mean Annual Temp. °F 62		Baro. Press. - P _g 13.2		State N. Mex.	
L 8146	H 7146	G _g 0.648	% CO ₂ 0.31	% N ₂ 1.20	% H ₂ S Nil	Prover -	Meter Run 2"	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.	Temp. °F	Duration of Flow
SI							2312	54			71 hrs
1.	2.067 x 1.250			300	12	75	2236	77			1 hr
2.	2.067 x 1.250			300	26	75	2157	80			1 hr
3.	2.067 x 1.250			300	50	75	2014	83			1 hr
4.	2.067 x 1.250			300	94	75	1763	87			1 hr
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	8.120	61.31	313.2	.9859	1.257	1.0279	634
2.	8.120	90.24	313.2	.9859	1.257	1.0279	933
3.	8.120	125.14	313.2	.9859	1.257	1.0279	1294
4.	8.120	171.58	313.2	.9859	1.257	1.0279	1775
5.							

NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio 255.44 Mcf/bbl.	A.P.I. Gravity of Liquid Hydrocarbons 52.6 Deg.	Specific Gravity Separator Gas 0.633	Specific Gravity Flowing Fluid X X X X X	Critical Pressure 671.5 P.S.I.A.	Critical Temperature 367 R
1.	0.466	535	1.458	.9465				X X X X X X X X	648	
2.	0.466	535	1.458	.9465						
3.	0.466	535	1.458	.9465						
4.	0.466	535	1.458	.9465						
5.										

NO.	P _f ²	P _w	P _w ²	P _f ² - P _w ²
1			7993	711
2			7441	1263
3			6502	2202
4			4998	3706
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.3486$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3027$

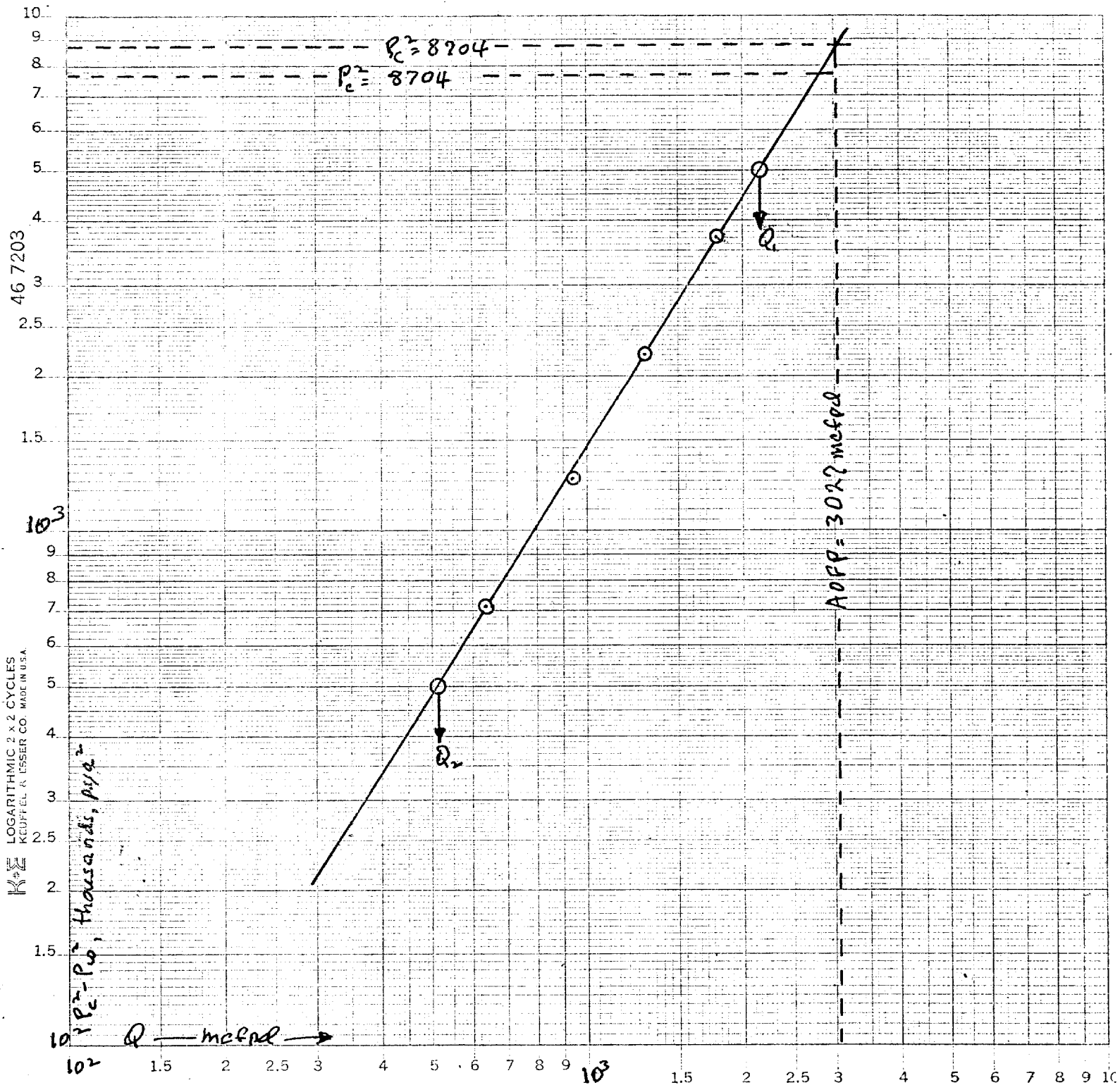
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.7051$

Absolute Open Flow 3027 Mcfd @ 15.025	Angle of Slope θ 58 deg	Slope, n 0.625
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Remarks: Static pressures by Bennett Wireline, flowing pressures by DWT
 Calculations worksheet C122D attached.

Approved By Commission:	Conducted By: Don Weaver	Calculated By: Eddie Mahfood	Checked By:
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YPC - Spearman KQ Fed No.1
K-13-18S-24E, Richard Knob Atoka Morrow, Eddy Co. N.Mex.



$$Q_1 = 2155 \text{ mcfpd} \quad \log Q_1 = 3.3334$$

$$Q_2 = 511 \text{ mcfpd} \quad \log Q_2 = 2.7084$$

$$n = 0.6250$$

LOCATION: Unit K Section 3 Township 8 S Range 4 E N17

$P_{Cr} = \frac{696}{\text{TABLE IX \& X}}$ $T_{Cr} = \frac{381}{\text{TABLE IX \& X}}$

[illegible]