

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

RECEIVED

Form C-122
Revised 9-1-65

MAR - 8 1982

C/SF
C-122

O. C. D.

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 1-9-82		ARTESIA, OFFICE	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			
Pool Penasco Draw Permo Penn				Formation Canyon		Unit	
Completion Date 11-16-81		Total Depth 8800		Plug Back To 7571 KB		Elevation 3679 KB	
Case Size 4 1/2"	Wt. 10.5#	d 4.052	Set At 8402	Perforations: From 7325 To 7530 KB		Well No. 1	
Fig. Size 2 3/8"	Wt. 4.7#	d 1.995	Set At 7287	Perforations: From To		Unit Sec. Twp. Rge. K 13 18S 24E	
Type Well - Single - Dradhead - G.C. or G.C. Multiple Single				Packer Set At 7287 KB		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 132 7426		Mean Annual Temp. °F 62		State New Mexico	
L 7420	H 7420	Cg 0.704	% CO ₂ 3.50	% H ₂ 5.21	% H ₂ S Nil	Prover -----	Meter Run 2"
						Tape 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	
51							1597	56			
1.	2.067 X 0.750			210	3	50	216	60			24 hrs.
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	2.709	25.88	22.32	1.010	1.115	1.025	83.5
2							
3							
4							
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.330	510	1.345	9.514	A.P.I. Gravity of Liquid Hydrocarbons	Deq.
2					Specific Gravity Separator Gas	0.704
3					Specific Gravity Flowing Fluid	XXXXXX
4					Critical Pressure	676
5					Critical Temperature	379.3

NO.	P _t ²	P _w ²	R _w ²	P _t ² - R _w ²	(1) $\frac{P_t^2}{P_t^2 - R_w^2} \times 1.065$	(2) $\left[\frac{P_t^2}{P_t^2 - R_w^2} \right]^n \times 1.065$
1		564.5	318.7	4890		
2						
3						
4						
5						

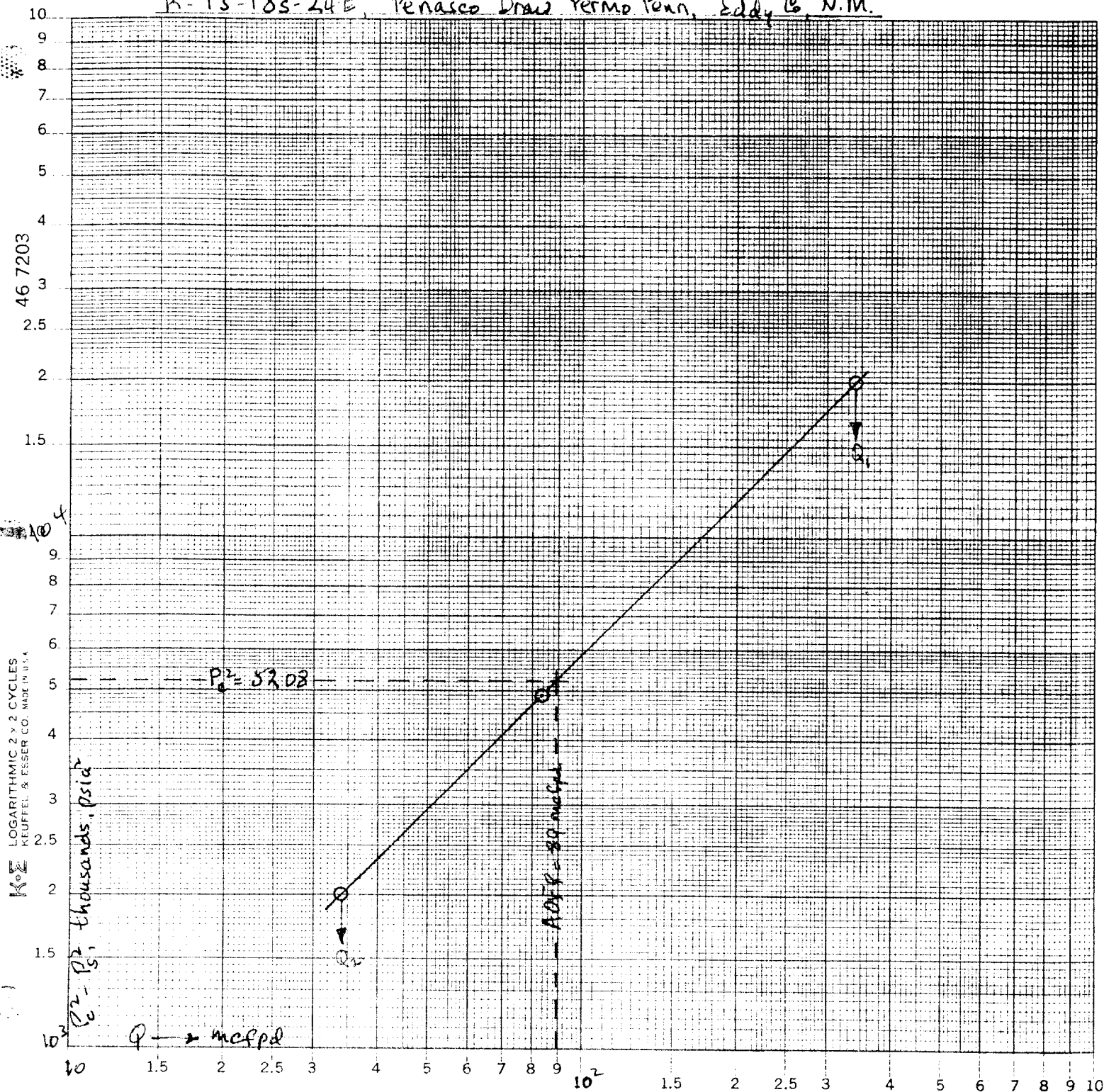
Absolute Oper. Flow		89	Mcf/d @ 15.025	Angle of Slope	45 deg	Slope, n	1.000
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Remarks: Static pressures by Bennett Wireline flowing pressures by DWT. Well loaded up or depleted rapidly. Could get only one point.

Approved by Commission:	Conducted By:	Calculated By:	Checked By:
	Bob Gary	Eddie Mahfood	

YPC- Spearman KQ Federal No.1

K-13-18s-24E, Penasco Draw Permo Penn, Eddy Co, N.M.



$$Q_1 = 340 \text{ mcfpd} \quad \log Q_1 = 2.5315$$

$$Q_2 = 34 \text{ mcfpd} \quad \log Q_2 = 1.5315$$

$$\eta = 1.0000$$

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

G-122D
Adopted 9-1-65

COMPANY YPC LEASE Specimen K&L WELL NO. 1 DATE 1-9-82

LOCATION: Unit K Section 13 Township 18S Range 24E

1 6783 7420 H 6783 L/H 1000 G 0.764 %CO₂ 3.50 %N₂ 5.21 %H₂S NIL
 2 7282 (377) 2900
 3 132 (600) 2167
 4 7420 (400) 3173 F₁ 0.0155 GH 4775.2 P_{cr} 676 T_{cr} 379.3
 5 7420 (400) 3173

TABLE 17 & 4

TABLE 17 & 4

LINE	1	2	3	4					
1 C _m									
2 C _m (Table 17)									
3 C _m (Table 17)									
4 C _m (Table 17)									
5 C _m (Table 17)									
6 C _m (Table 17)									
7 C _m (Table 17)									
8 e ⁵ (Table 17)									
9 1-e ⁵ (Table 17)									
10 P ₁									
11 P ₂ (Table 17)									
12 P ₃ (Table 17)									
13 P ₄ = P ₁ T ₁									
14 P ₅ Q _m									
15 L/H (F ₁ Q _m) ²									
16 F _w = L/H (F ₁ Q _m) ² (1-e ⁵)									
17 R _w ² = P ₁ ² + F _w									
18 P _s ² = e ⁵ P _w ²									
19 P _s = √(P _s ²)									
20 P = (P ₁ + P _s) / 2									
21 P _r = (P/P _{cr})									
22 T _r = (T/T _{cr})									
23 Z (Table XI)									

P₂ 7420 (400) 3173 7282.2 564.5