

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 11-7-80		JAN 05 1981	
Company Yates Petroleum Corporation						Connection Transwestern Pipeline Company		O. C. D. ARTESIA, OFFICE	
Pool Penasco Draw Permo Penn						Formation Cisco		Unit L-2919	
Completion Date 7-11-80		Total Depth 9200		Plug Back TD 7518KB		Elevation 3699 KB		Farm or Lease Name SRC State KZ	
Cas. Size 4 1/2	Wt. 10.5#	d 4.052	Set At 9200' KB	Perforations: From 7468 To 7483 KB		Well No. 6			
Thq. Size 2 3/8"	Wt. 4.7#	d 1.995#	Set At 7.436 KB	Perforations: From To		Unit C	Sec. 1	Twp. 19S	Rge. 24E
Type Well - Single - Bradenhead - G.C. or G.O. Multiple single						Packer Set At 7436 KB		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 132 @ 7481		Mean Annual Temp. °F 62		Baro. Press. - P _g 13.2		State New Mexico	
L 7472	H 7472	G _g 0.720	% CO ₂ 0.27	% N ₂ 0.92	% H ₂ S Nil	Prover ---	Meter Run 2"	Taps 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	
SI						2296	55			weeks
1.	2.067	X 0.750	530	24	65	2119	64			20
2.	2.067	X 0.750	525	44	65	2060	65			24
3.	2.067	X 1.000	480	37	68	2010	66			24
4.	2.067	X 1.000	485	89	67	1868	67			24
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mc/d
1	2.709	114.18	543.2	0.9952	1.225	1.0633	401
2	2.709	153.89	538.2	0.9952	1.225	1.0630	540
3	4.946	135.09	493.2	0.9924	1.225	1.0509	854
4	4.946	210.57	498.2	0.9933	1.225	1.0520	1333
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	33.45	Mcf/bbl.
1	0.811	525	1.389'	.8845	A.P.I. Gravity of Liquid Hydrocarbons	64.5	Deg.
2	0.803	525	1.389	.8850	Specific Gravity Separator Gas	.666	XXXXXXXXXX
3	0.736	528	1.397	.9055	Specific Gravity Flowing Fluid	XXXXXX	
4	0.744	527	1.394	.9035	Critical Pressure	P.S.I.A.	0.746 P.S.I.A.
5					Critical Temperature	670 °R	680 °R

P _c 3058.2 P _c ² 9248				
NO	P _i ²	P _w	R _w ²	P _c ² - R _w ²
1			7876	1372
2			7459	1789
3			7126	2122
4			6194	3054
5				

$$(1) \frac{P_c^2}{P_c^2 - R_w^2} = 3.028$$

$$AOF = Q \left[\frac{R_c^2}{P_c^2 - R_w^2} \right]^n = 4037$$

$$(2) \left[\frac{R_c^2}{P_c^2 - R_w^2} \right]^n = 3.028$$

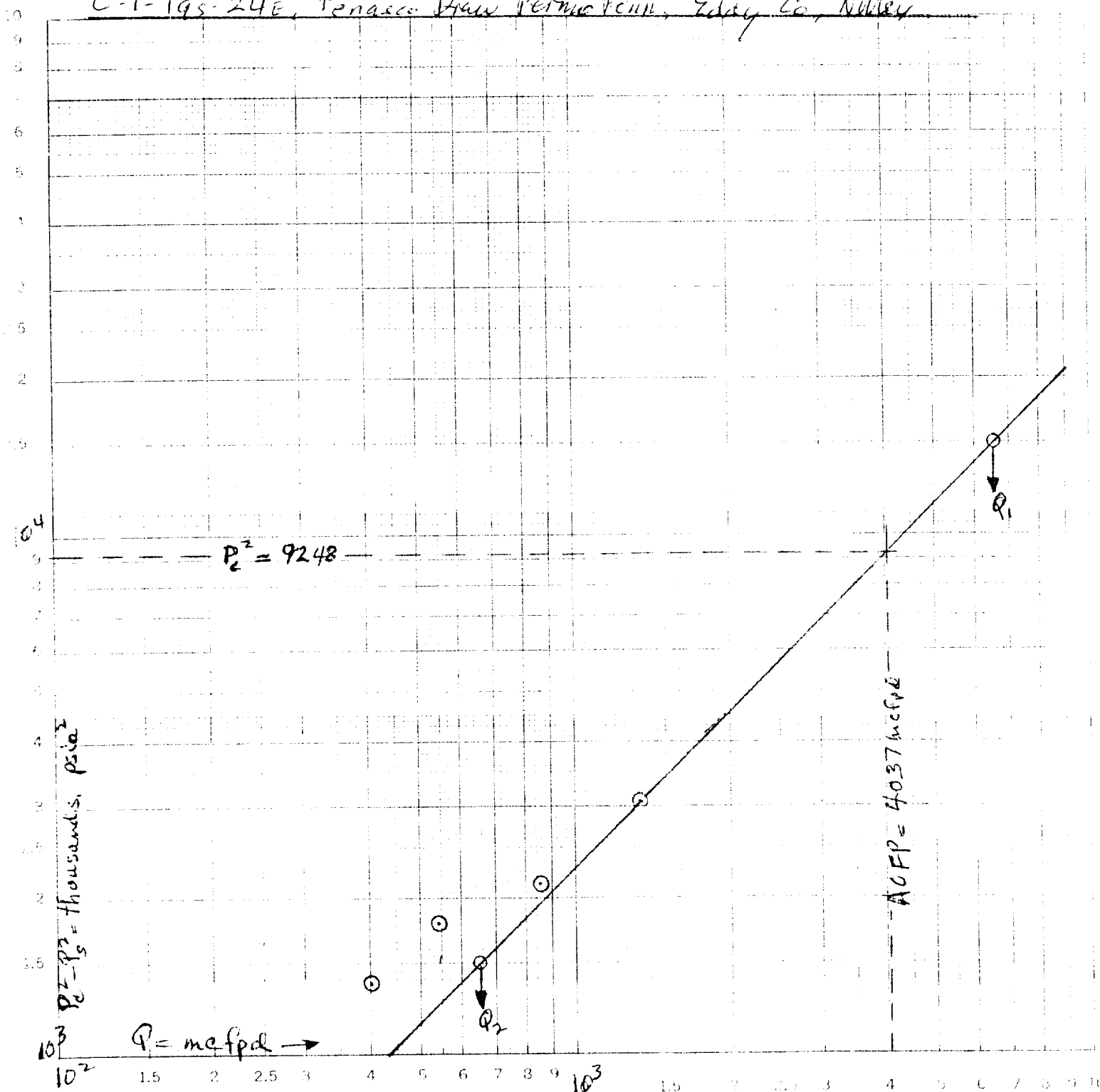
Absolute Open Flow	4037	Mcf/d @ 15.025	Angle of Slope @	45 deg.	Slope, n	1.000
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Remarks: Static pressures by Bennet Wireline flowing pressures by DWT. calculations worksheet C112D attached.

Approved By Commission:	Conducted By: Frank Moreno	Calculated By: Eddie Mahfood	Checked By:
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YPC- SRC@ KZ State No. 6

C-1-195-24E, Pegasus Draw Permian Penn., Eddy Co., N.M.



$$Q_1 = 6550 \text{ mcfpd}$$

$$\log Q_1 = 3.8162$$

$$Q_2 = 655 \text{ mcfpd}$$

$$\log Q_2 = 2.8162$$

$$n = 1.0000$$

COMPANY YIP LEASE S.K.S. 1-1-1-1 WELL NO. 1 DATE 1-7-65

LOCATION: Unit 2 Section 1 Township 11N Range 24E

L 74722 H 74722 L/H 1.0000 G 206 % CO₂ 1.00 % N₂ 0.00 % H₂S 0.00
d 24722 F₁ 0.00 GH 55740 P_{CT} 650.2 T_{CT} 110.0

LINE	1	2	3	4					
1 Q _m		0.401	0.540	0.854	1.333				
2 T _w (W.H. °R)	515	524	525	526	527				
3 T _s (B.H. °R)	592	591	591	590	590				
4 T = $\frac{T_w + T_s}{2}$	553.5	557.5	558	558	558.5				
5 Z (Est.)	1686	1683	1681	1679	1678.5				
6 TZ	379.70	380.77	380.00	378.88	378.44				
7 GH/TZ	14.680	14.639	14.664	14.712	14.710				
8 e ^s (Table XIV)	1.7342	1.7315	1.7334	1.7362	1.7361				
9 1-e ^s (Table XIV)		0.4225	0.4231	0.4240	0.4240				
10 P ₁	2304.2	2132.2	2073.2	2023.2	1881.2				
11 P ₁ 2/1000	535.211	4546.28	4278.16	4093.3	3538.91				
12 F ₁ (Table XV)	0.55052	0.54897	0.55009	0.55171	0.55162				
13 F ₀ = F ₁ TZ		6.1986	6.186	6.165	6.1688				
14 F ₀ Q _m		2.4856	3.240	5.267	8.223				
15 L/H (F ₀ Q _m) ²		6.178	11.159	27.75	67.617				
16 F ₀ = L/H (F ₀ Q _m) ² (1-e ^{-s})		2.61	4.72	11.8	28.67				
17 P _w ² = P ₁ ² + F _w		4548.89	4302.80	4105.1	3567.58				
18 P _s ² = e ^s P _w ²	9248	7876.4	7458.6	7126.3	6193.7				
19 P _s	3041.2	2806.5	2731.0	2669.7	2488.7				
20 P = $\frac{P_1 + P_s}{2}$	2675.2	2469.3	2402.1	2346.4	2185.0				
21 P ₁ = (P/P _{CT})	3.734	3.631	3.533	3.451	3.213				
22 T ₁ = (T/T _{CT})	1.353	1.363	1.364	1.364	1.365				
23 Z (Table XI)	1688	0.683	0.681	0.679	0.678				