

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

Form C-122
Revised 9-1-85

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3-20-82		MAY 12 1982	
Company Vates Petroleum Corp.				Operator Transwestern Pipeline Co.		O. C. D.	
Pool Eagle Creek Strawn				Formation Strawn		ARTESIA OFFICE	
Completion Date 8-13-81		Total Depth 8677 KB		Plug Back To 8400 KB		Flow Point 3459 KB	
Form or Lease Name Superior Federal							
Cas. Size 5 1/2	Wt. 17 K	d 4.892	Set At 8677	Perforations: From 8011 To 8037		Well No. 2	
Tub. Size 2 3/8	Wt. 4.7	d 1.995	Set At 7973	Perforations: From To		Unit Sec. Twp. Rge. K 1 - 18S - 25E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single				Packer Set At 7973		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 139 8018		Mean Annual Temp. °F 62		State New Mexico	
L H		Cq	% CO ₂	% H ₂	% H ₂ S	Prover	Meter Run Tape
8018 8018		0.628	0.29	0.46	Nil	--	flanged

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. in. H ₂ O	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							2205	60			Days
1.	2.067 x 0.625			210	14	54	2106	67			16 hrs
2.	2.067 x 0.625			215	25	55	2042	69			24 hrs
3.	2.067 x 0.625			220	43	56	1925	70			24 hrs
4.	2.067 x 0.625			222	71	57	1738	71			24 hrs
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, Mcfd
1	1.866	55.90	223.2	1.006	1.268	1.0214	136
2	1.866	75.53	228.2	1.005	1.268	1.0218	184
3	1.866	99.92	232.2	1.004	1.268	1.0220	243
4	1.866	128.95	234.2	1.003	1.268	1.0222	313
5							

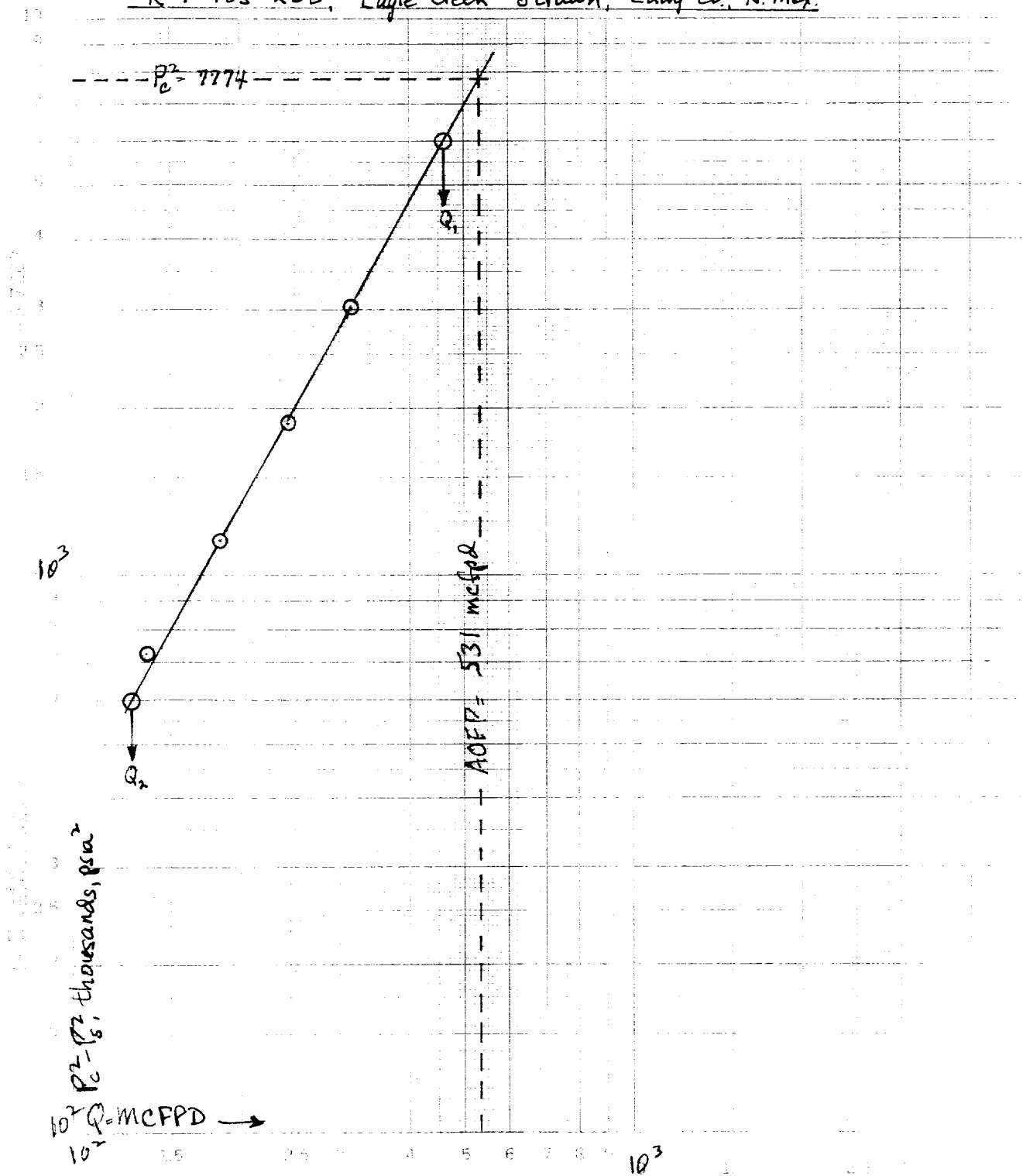
NO.	R ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	0.332	514	1.412	.9585	527.2 Mcf/bbl.	56.2 Deg.	0.622	XXXXXX	672 P.S.I.A.	364 °R
2	0.340	515	1.415	.9578				0.628	673 P.S.I.A.	366 °R
3	0.346	516	1.418	.9575						
4	0.349	517	1.420	.9571						
5										

NO.	P ₁ ²	P _w ²	R ₁ ²	P ₁ ² - R ₁ ²	(1) $\frac{P_1^2}{R_1^2 - R_w^2} = 2.587$	(2) $\left[\frac{P_1^2}{R_1^2 - R_w^2} \right]^n = 1.6957$
1			7053	721		
2			6621	1153		
3			5886	1888		
4			4769	3005		
5						

Absolute Open Flow		531 Mcfd @ 15.025	Angle of Slope	60.94 deg	Slope, n	0.5556
Remarks: Static Pressures by Bennett Wireline, flowing pressures by D.W.T. Calculations work sheet C122D attached.						
Approved by Commission:		Checked By:		Calculated By:		Checked By:
				Eddie Mahfood		

YPC - Superior Federal No. 2

K-1-18s-25E, Eagle Creek Strawn, Eddy Co., N. Mex.



$$Q_1 = 460 \text{ mcfpd}$$

$$Q_2 = 128 \text{ mcfpd}$$

$$\log Q_1 = 2.6628$$

$$\log Q_2 = 2.1072$$

$$n = 0.5556$$

C-122D
Adopted 9-1-65

COMPANY

LEASE

WELL NO.

DATE _____

LOCATION: Unit

Section

Township

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TABLE IX A X

LINE	51	1	2	3	4
1 Q_m	—	2136	61124	3347	3313
2 T_w (W.H. °R)	520	527	529	530	531
3 T_s (B.H. °R)	524	543	547	546	545
4 $T = (\frac{T_w + T_s}{2})$	559.5	562.5	563	563	563
5 Z (Est.)	7375	7555	746	747	760
6 TZ	112.63	112.819	119.992	1126.561	1127.83
7 GR/TZ	2.0077	2.00344	11.9224	11.9573	11.7026
8 e^s (Table XIV)	1.5830	1.5772	1.5673	1.5661	1.5544
9 $1 - e^{-s}$ (Table XIV)	—	0.7605	0.6220	0.5616	0.3567
10 P_t	22182	21142	20552	19382	17512
11 $P_t^{2/1000}$	14920.4	1491.0	4225.80	3756.62	3066.70
12 F_T (Table XV)	645740	645129	644938	644878	644110
13 $F_C = F_T \cdot T_Z$	—	670220	67366	67455	678632
14 $F_C \cdot Q_m$	—	69123	10240	16392	21482
15 $L/H (F_C \cdot Q_m)^2$	—	6522	1.5365	2627	46147
16 $F_w = L/H (F_C \cdot Q_m)^2 (1 - e^{-s})$	—	3.30	0.55	0.10	1.65
17 $F_w^2 = P_t^2 + F_w$	—	94775	4224.41	3257.59	3066.35
18 $F_s^2 = e^s P_w^2$	1774.2	7052.7	6620.9	5205.9	4769.4
19 P_s	2730.2	3652.7	2573.1	2426.1	2173.4
20 $P = (\frac{P_t + P_s}{2})$	2565.2	2392.4	2314.2	2192.1	1967.6
21 $P_T = (P/P_{at})$	3434	3225	3124	2943	2634
22 $T_T = (T/T_{at})$	1.448	1.455	1.456	1.4565	1.4565
23 Z (Table XI)	17375	17435	1746	1747	1760

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