Form C-122
Revised 9-1-65

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

RECEIVED
OCT 31 1980
O. C. D.
ARTESIA, OFFICE

Type Test: [XX] Initial [ ] Annual [ ] Special — Test Date: 9-3-80

Company: Yates Petroleum Corp. ✓ — Connection: Transwestern Pipeline Company

Pool: ~~Wildcat Abo~~ Pecos Slope - Abo Gas — Formation: Abo

Unit: NM 9982

Completion Date: 7-26-80 — Total Depth: 5250' KB — Plug Back TD: 5200' KB — Elevation: 3804' KB

Farm or Lease Name: Teckla "MD" Fed.

Well No.: #2

Csg. Size	Wt.	d	Set At	Perforations:
5-1/2	14#	5.012	5214'	From 3961' To 3978'
Tbg. Size	Wt.	d	Set At	Perforations:
2-7/8	6.5#	2.441	3907'	From To

Unit: C — Sec.: 13 — Twp.: T6S — Rge.: R25E

County: Chaves Co.

Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single — Packer Set At: 3907' KB

State: New Mexico

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. – P_a
Tubing	98 @ 3970	62	13.2

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
3964	3964	0.642	0.65	4.17	Nil	---	2"	Flanged

FLOW DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F
SI						
1.	2.067	x	0.875	360	12	90
2.	"			360	22	90
3.	"			360	45	90
4.	"			360	87	90
5.						

TUBING DATA / CASING DATA

NO.	Tubing Press. p.s.i.g.	Tubing Temp. °F	Casing Press. p.s.i.g.	Casing Temp. °F	Duration of Flow
SI	998	76			Months
1.	956	80			1 hr
2.	940	82			1 hr
3.	914	83			1 hr
4.	878	84			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 Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	3.729	66.92	373.2	0.9723	1.248	1.0281	311
2.	3.729	90.61	373.2	0.9723	1.248	1.0281	422
3.	3.729	129.59	373.2	0.9723	1.248	1.0281	603
4.	3.729	180.19	373.2	0.9723	1.248	1.0281	838
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	0.561	550	1.5257	0.946
2.	0.561	550	1.5257	0.946
3.	0.561	550	1.5257	0.946
4.	0.561	550	1.5257	0.946
5.				

Gas Liquid Hydrocarbon Ratio --- Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons --- Deg.

Specific Gravity Separator Gas	0.642	XXXXXXXXXX
Specific Gravity Flowing Fluid	XXXXX	0.642
Critical Pressure	665 P.S.I.A.	679 P.S.I.A.
Critical Temperature	360.5 R	365.5 R

P_c 1120.2 P_c^2 1255

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1			1150	105
2			1112	143
3			1052	203
4			972	283
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.4346$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4.4109$

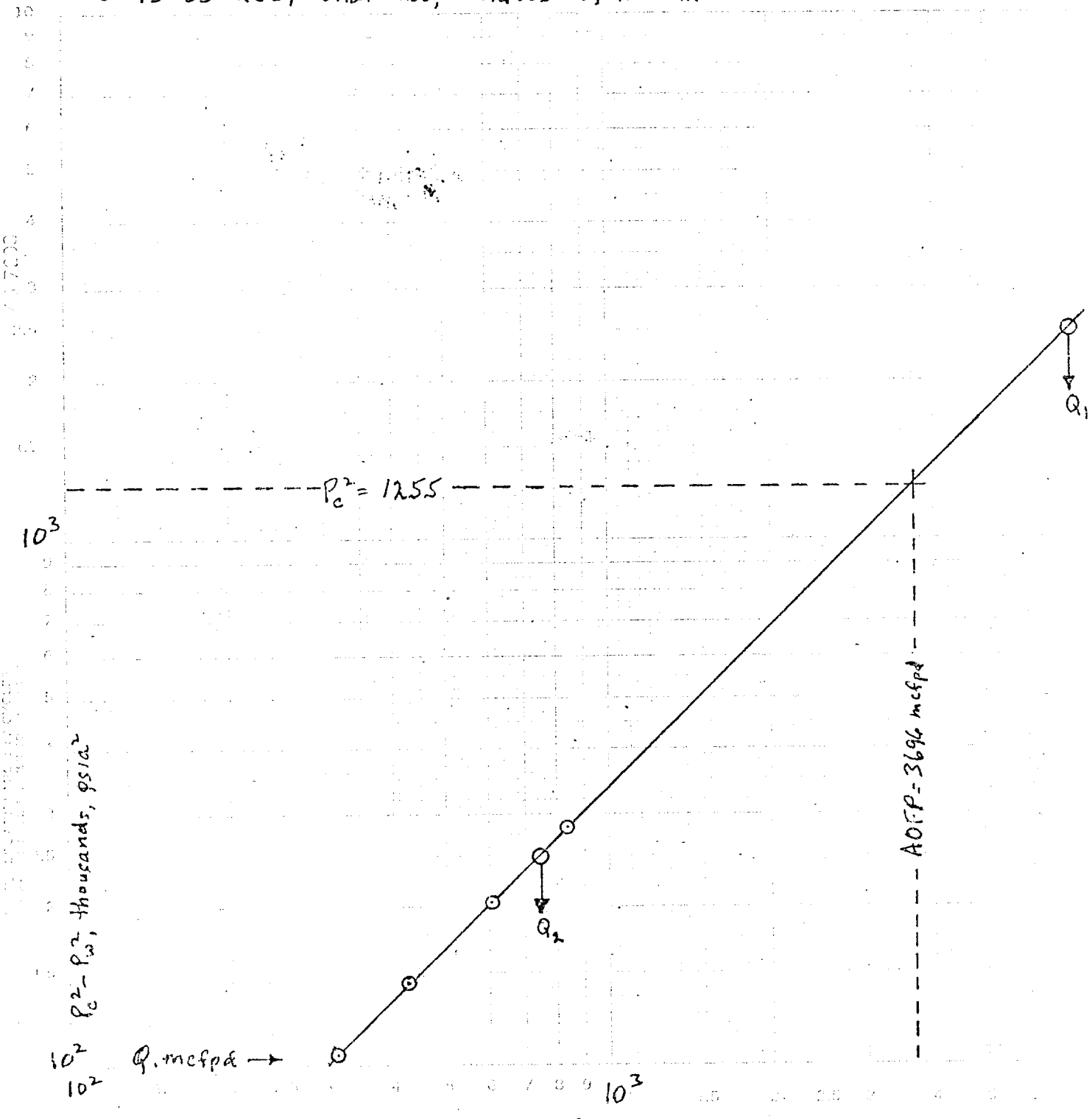
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3696$

Absolute Open Flow: 3696 Mcfd @ 15.025 — Angle of Slope θ: 45.1 degree — Slope, n: 0.9964

Remarks: Static pressures by Bennett Wireline, flowing pressures by DWT.
Calculations worksheet C-122D attached.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Don Weaver	Eddie Mahfood	

YPC - Teckla MD Federal No. 2
C-13-6S-25E, Und. Abo, Chaves Co, N. Mex.



Q_1 = 7150 mcfpd Log Q_1 = 3.8543
Q_2 = 721 mcfpd log Q_2 = 2.8579
n = 0.9964

WORKSHEET FOR CALCULATION OF ST. IC COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Adopted 9-1-65

COMPANY YIC LEASE [illegible] WELL NO. 2 DATE [illegible]

LOCATION: Unit [illegible] Section 13 Township [illegible] Range [illegible]

L [illegible] H [illegible] L/H 1.00 G [illegible] % CO_2 0.65 % N_2 4.17 % H_2S N.I

d [illegible] F_r [illegible] GH 2515 P_{cr} [illegible] (TABLE IX & X) T_{cr} [illegible] (TABLE IX & X)

LINE										
1 Q_m	[illegible]	[illegible]	[illegible]	[illegible]	0.838					
2 T_w (W.H. °R)	[illegible]	[illegible]	542	513	[illegible]					
3 T_s (B.H. °R)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
4 $T = (\frac{T_w + T_s}{2})$	[illegible]	[illegible]	[illegible]	[illegible]	550					
5 Z (Est.)	[illegible]	[illegible]	[illegible]	.8665	.871					
6 TZ	[illegible]	471.37	472.67	476.58	479.05					
7 GH/TZ	[illegible]	5.3435	5.3273	5.340	5.3126					
8 e^s (Table XIV)	[illegible]	1.2242	1.2232	1.2217	1.2205					
9 $1-e^{-s}$ (Table XIV)		0.1831	0.1825	0.1815	0.1806					
10 P_t	[illegible]	961.2	[illegible]	927.2	891.2					
11 $P_t^2/1000$	1022.5	939.3	908.6	859.7	794.2					
12 F_r (Table XV)	0.20473	0.20226	0.20149	0.20026	0.19922					
13 $F_c = F_r TZ$		4.380	4.2965	4.4436	4.4465					
14 $F_c Q_m$		1.362	1.3553	2.669	3.726					
15 $L/H (F_c Q_m)^2$		1.855	1.842	7.115	13.88					
16 $F_w = L/H(F_c Q_m)^2(1-e^{-s})$		0.3	0.3	1.3	2.5					
17 $P_w^2 = P_t^2 + F_w$		1310.6	909.2	861.0	796.7					
18 $P_s^2 = e^s P_w^2$	[illegible]	1150.3	1112.1	1051.9	972.4					
19 P_s	[illegible]	1072.5	1054.6	1025.6	986.1					
20 $P = (\frac{P_t + P_s}{2})$	[illegible]	1020.8	1003.9	976.4	938.6					
21 $P_r = (P/P_{cr})$	[illegible]	1.503	1.478	1.438	1.382					
22 $T_r = (T/T_{cr})$	1.497	1.502	1.5035	1.502	1.505					
23 Z (Table XI)	[illegible]	0.8515	0.862	0.8665	0.871