

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

RECEIVED Form C-122
Revised 9-7-65

JUN 2 1982

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4-6-82		O. C. D.	
Company Yates Petroleum Corporation						Connection Transwestern Pipeline Company		ARTESIA, OFFICE	
Pool Pecos Slope Abo						Formation Abo		Unit L-6274	
Completion Date 2-20-82		Total Depth 4300'		Plug Back TD 4235'		Elevation 3762.5' GR		Form. or Lease Name Dee OQ State	
Csg. Size 4-1/2"	Wt. 10.5#	d 4.052	Set At 4237'	Perforations: From 3812' To 3835'		Well No. 3			
Tub. Size 2-3/8"	Wt. 4.7#	d 1.995"	Set At 3802'	Perforations: From - To -		Unit A	Sec. 32	Twp. 5S	Rge. 25E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At None		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 99 @ 3835'		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 3802	H 3802	G _g .677	% CO ₂ 2.18	% N ₂ 7.36	% H ₂ S 0	Prover ---	Meter Run 2"	Type 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	of Flow
5!							979				days
1.	2.067 x 1.375			465	13	77	910	64			24 hrs
2.	2.067 x 1.375			460	27	77	875	63			24 hrs
3.	2.067 x 1.375			465	46	77	829	62			24 hrs
4.	2.067 x 1.375			465	72	77	770	62			24 hrs
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, Mgd
1	10.20	78.84	478.2	.9840	1.215	1.139	1095
2	10.20	113.03	473.2	.9840	1.215	1.039	1432
3	10.20	148.31	478.2	.9840	1.215	1.134	2060
4	10.20	185.55	478.2	.9840	1.215	1.139	2577
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	.7202	537	1.488	.926	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	.7127	537	1.488	.927	Specific Gravity Separator Gas .677 X X X X X X X X
3.	.7202	537	1.488	.926	Specific Gravity Flowing Fluid X X X X X
4.	.7202	537	1.488	.926	Critical Pressure 664 P.S.I.A. P.S.I.A.
5.					Critical Temperature 361 R R

P _r 992.2	P _w 984.5		
NO.	P _r ²	P _w ²	P _r ² - P _w ²
1	852.3	931	868.6
2	788.9	903.9	817.0
3	709.3	876.3	767.9
4	613.4	839.9	705.4
5			

(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 2.238$ (2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2.175$

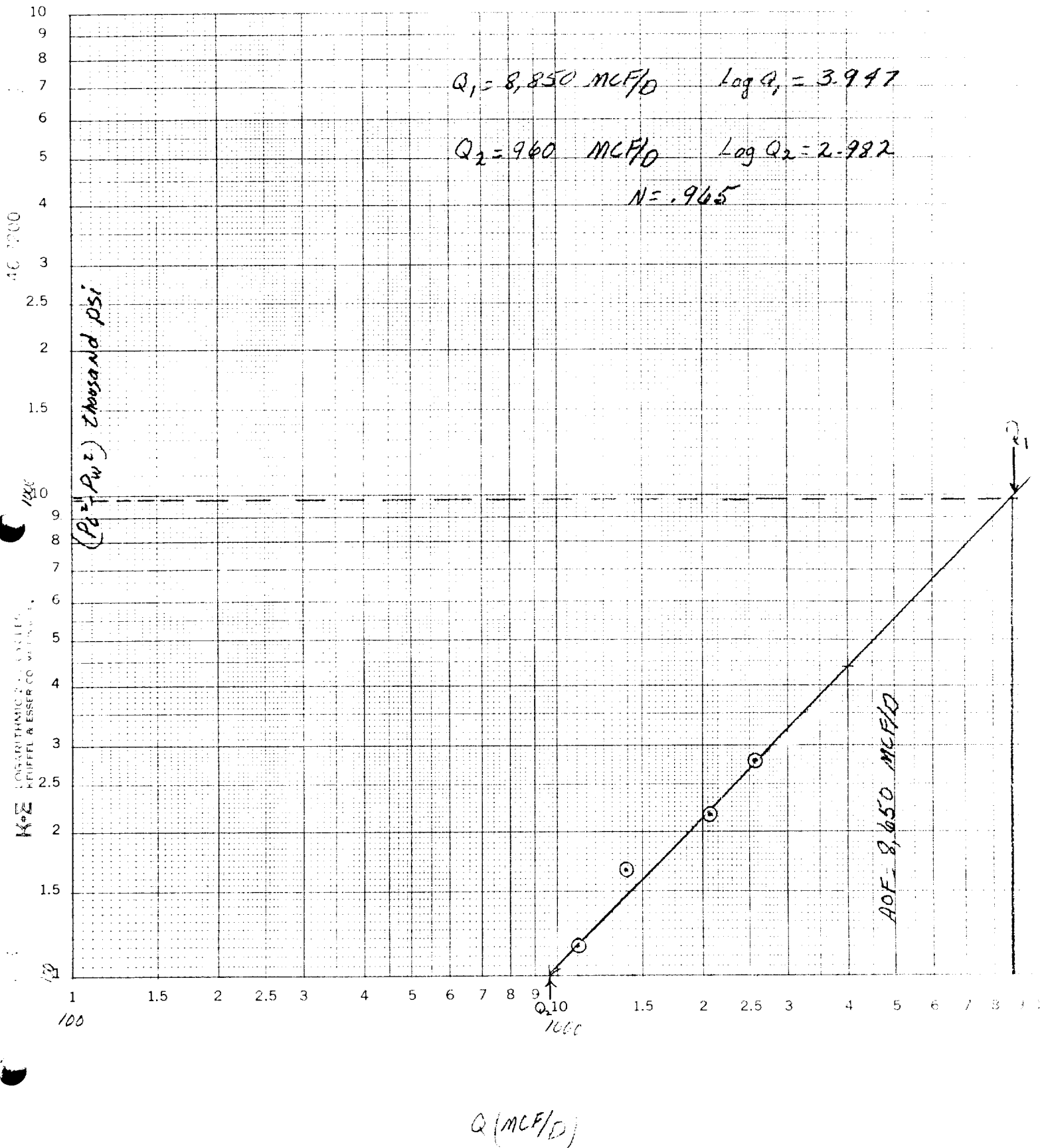
AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 8650$

Absolute Open Flow 8,650 Mgd @ 15.025	Angle of Slope θ _____	Slope, n .965
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Remarks: Static pressure by Bennett Wireline, flowing pressure by DWT calculations.
Worksheet C122D attached.

Approved By Commission:	Conducted By: David Weaver	Calculated By: Scott Yates	Checked By: Ray Stall
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Dee 00 State #3
Unit A, Sec 32, T5, R25E



WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

C-122D
Revised 9-1-65

COMPANY YATES P&I Corp LEASE DECO STATE WELL NO. 3 DATE 6-1-82

LOCATION: Unit A Section 32 Township 5S Range 25E

L 3802 H 3802 L/H 1 G 677 % CO₂ 2.18 % N₂ 7.36 % H₂S 0

d 1.995" F_r .015321 GH 2574 P_{cr} 464 T_{cr} 361

1st RATE 2nd RATE 3rd RATE 4th RATE

LINE	1 st TRAIL	2 nd TRAIL	1 st TRAIL	2 nd TRAIL	1 st TRAIL	2 nd TRAIL	1 st TRAIL	2 nd TRAIL
1 Q _m	1.095	1.095	1.432	1.432	2.040	2.040	2.577	2.577
2 T _g (F _g H _g Q _m)	524	524	523	523	522	522	522	522
3 T _g (F _g H _g Q _m)	559	559	559	559	559	559	559	559
4 T _g (F _g H _g Q _m)	541	541	541	541	540	540	540	540
5 T _g (F _g H _g Q _m)	850	862	865	866	865	871	876	877
6 T _g (F _g H _g Q _m)	459.9	466.3	467.9	468.5	467.1	470.3	473.0	473.6
7 GH/T _g	5597	5519	5500	5494	5511	5473	5441	5435
8 e ^s (Table XIV)	1.234	1.230	1.229	1.229	1.230	1.228	1.226	1.226
9 1-e ^s (Table XIV)	.190	.187	.186	.186	.187	.186	.184	.184
10 P ₁	923.2	923.2	888.2	888.2	842.2	842.2	783.2	783.2
11 P ₁ 2/1000	852.3	852.3	788.9	788.9	709.3	709.3	613.4	613.4
12 F _r (Table XV)	.015321	.015321	.015321	.015321	.015321	.015321	.015321	.015321
13 F _r = F _r T _g	8.384	8.543	8.572	8.583	8.558	8.616	8.666	8.677
14 F _r Q _m	9.1809	9.355	12.28	12.29	17.62	17.75	22.33	22.36
15 L/H (F _r Q _m) ²	84.29	8251	150.8	151.1	310.5	315.1	498.7	499.9
16 F _w = L/H (F _r Q _m) ² (1-e ^{-s})	16.015	16.364	28.04	28.1	58.06	58.59	91.77	91.99
17 P _w ² = P ₁ ² + F _w	868.3	868.6	816.9	817.0	767.36	767.9	705.2	705.4
18 P _s ² = e ^s P _w ²	1071.5	1068.5	1003.9	1004.1	943.8	942.9	863.1	864.8
19 P _s	1035.1	1033.7	1001.9	1002.0	971.5	971.0	929	929.9
20 P = (P ₁ ² + P _s ²)	979.16	978.5	945.09	945.1	906.8	906.6	856.1	856.6
21 P _r = (P/P _{cr})	1.474	1.474	1.423	1.423	1.366	1.365	1.289	1.290
22 T _r = (T/T _{cr})	1.499	1.499	1.499	1.499	1.496	1.496	1.496	1.496
23 Z (Table XI)	0.862	0.862	0.866	0.866	.871	.871	.877	.877