

c/s F File

N MEXICO OIL CONSERVATION COMMISSION Form C-122
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR

RECEIVED BY
JUN 08 1984

Type Test [x] Initial [] Annual [] Special				Test Date 4/10/84		O. C. D.	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			
Pool Pecos Slope				Formation Abo		Unit	
Completion Date 5/17/83		Total Depth 4100.0'		Plug Back TD 4019.0'		Elevation 3776.3'	
Farm or Lease Name Sakra "SA"				Well No. 5			
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4070.0'	Perforations: From 3649.0' To 3883.0'		Unit Sec Twp Rge A 27 6S 25E	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3610.0'	Perforations: From 0.0' To 0.0'			
Type Well Single				Packer Set At 0.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 110 @ 3608'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
State New Mexico		L 3610.0'		H 3610.0'		Gg .643	
%CO2 .38		%N2 4.82		%H2S 0.00		Prover 0.000"	
Meter Run 2.000"		Taps Flange					

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Prover Orifice Size X Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	
SI	0.000 X 0.000	0	0.0	66	997	0	0	0	0 hrs.
1.	2.067 X .625	125	35.7	65	688	62	0	0	24 hrs.
2.	2.067 X .625	125	43.8	65	518	62	0	0	24 hrs.
3.	2.067 X .625	120	65.6	66	447	62	0	0	24 hrs.
4.	2.067 X .625	120	77.0	66	335	62	0	0	24 hrs.
5.	0.000 X 0.000	0	0.0	0	0	0	0	0	0 hrs.

RATE OF FLOW CALCULATIONS

NO	Coefficient (24 HOUR)	√hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	1.866	70.24	138.20	.995	1.247	1.010	164
2.	1.866	77.80	138.20	.995	1.247	1.010	182
3.	1.866	93.48	133.20	.994	1.247	1.009	218
4.	1.866	101.27	133.20	.994	1.247	1.009	237
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Pr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.
1.	.21	525	1.47	.981	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.21	525	1.47	.981	Specific Gravity Separator Gas	.643	xxxxxx
3.	.20	526	1.48	.982	Specific Gravity Flowing Fluid	xxxxxx	.643
4.	.20	526	1.48	.982	Critical Pressure	664.1 PSIA	664.1 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	356.1°R	356.1°R

Pc 1010.2 Pc2 1020.5				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	491.7	701.4	492.0	528.5
2.	282.2	531.6	282.6	737.9
3.	211.8	460.9	212.4	808.1
4.	121.2	349.3	122.0	898.5
5.	0.0	0.0	0.0	0.0

$\frac{Pc2}{Pc2-Pw2} = 1.1300$ (2) $\left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1.0869$
 $ROF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 257 \text{ Mcfd}$

Absolute Open Flow 257 Mcfd @ 15.025 Angle of Slope, θ 34 Slope, n .682

Remarks:

Approved By:	Conducted By: David Weaver	Calculated By: Andie Carpenter	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELL HEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 6/7/84

COMPANY Yates Petroleum Corporation LEASE Sacra "SA" WELL NO. 5

LOCATION: Unit A Section 27 Township 6S Range 25E

L 3610.0 H 3610.0 L/H 1.000 G .643 %CO₂ .38 %N₂ 4.82 %H₂S 0.00

d 1.995 Fr .017777 GH 2321.2 Pcr 664.1 Tcr 356.1

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.164	.182	.218	.237	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	570.0	570.0	570.0	570.0	0.0
4 T=(Tw+Ts)/2	546.0	546.0	546.0	546.0	0.0
5 Z(Est.)	.902	.925	.935	.951	0.000
6 TZ	492.5	505.1	510.5	519.2	0.0
7 GH/TZ	4.713	4.596	4.547	4.471	0.000
8 e ^s (Table XIV)	1.193	1.188	1.186	1.183	0.000
9 1-e ^{-s} (Table XIV)	.162	.158	.157	.154	0.000
10 Pt	701.2	531.2	460.2	348.2	0.0
11 Pt ² /1000	491.7	282.2	211.8	121.2	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.756	8.981	9.077	9.230	0.000
14 FcQm	1.438	1.634	1.981	2.183	0.000
15 L/H(FcQm) ²	2.069	2.671	3.926	4.766	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.335	.423	.615	.736	0.000
17 Pw ² =Pt ² +Fw	492.0	282.6	212.4	122.0	0.0
18 Ps ² =e ^s Pw ²	587.1	335.7	251.9	144.2	0.0
19 Ps	766.2	579.4	501.9	379.8	0.0
20 P=(Pt+Ps)/2	733.7	555.3	481.0	364.0	0.0
21 Pr=(P/Pcr)	1.10	.84	.72	.55	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.902	.925	.935	.951	0.000

Company	Yates Petroleum Corporation
Well	Sacra "SA" No. 5
Location	R, 27-6S-25E
County	Chaves
Date	6/7/84

