

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

RECEIVED C-122

45P
File

JUL 22 '88

Type Test [x] Initial [] Annual [] Special				Test Date 4/8/88		O. C. D. ARTESIA, OFFICE	
Company Yates Petroleum Corporation		Connection Transwestern Pipeline Company					
Pool Pecos Slope ABO		Formation Abo				Unit	
Completion Date 3/29/83		Total Depth 4200.0'		Plug Back TD 4154.0'		Elevation 3742.0'	
Farm or Lease Name Sacra SA							
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4200.0'	Perforations: From 3790.0' To 4038.0'		Well No. 9	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3742.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge M 19 6S 26E	
Type Well Single				Packer Set At 3743.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 110 @ 3742'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
State New Mexico							
L 3742.0'	H 3742.0'	Gg .642	%CO2 .03	%N2 5.23	%H2S 0.00	Proven 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	68	936	0	0	0	0 hrs.
1.	2.067 X 1.250	110	2.3	67	806	62	0	0	24 hrs.
2.	2.067 X 1.250	110	7.5	67	578	62	0	0	24 hrs.
3.	2.067 X 1.250	105	10.1	68	532	62	0	0	24 hrs.
4.	2.067 X 1.250	105	12.0	68	470	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.	8.134	16.83	123.20	.993	1.248	1.008	171
2.	8.134	30.40	123.20	.993	1.248	1.008	309
3.	8.134	34.55	118.20	.992	1.248	1.009	351
4.	8.134	37.66	118.20	.992	1.248	1.009	383
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.	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	.19	527	1.48	.984	0.000 Deg.	.642	xxxxxx	.642	661.9 PSIA	355.2°R
2.	.19	527	1.48	.984						
3.	.18	528	1.49	.982						
4.	.18	528	1.49	.982						
5.	0.00	0	0.00	0.000						

Pc 949.2 Pc2 901.0				
NO	Pt2	Pw	Pw2	Pc2-Pw2 (1)
1.	671.1	819.4	671.5	229.5
2.	349.5	592.3	350.8	550.2
3.	297.2	546.7	298.9	602.1
4.	233.5	485.2	235.4	665.6
5.	0.0	0.0	0.0	0.0

$$\frac{Pc^2}{Pc^2 - Pw^2} = \frac{1.3445}{(2)} \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.2494$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 478 \text{ Mcfd}$$

Absolute Open Flow 478 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .752
Remarks:

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

Adopted 9-1-65

DATE 7/18/88

COMPANY Yates Petroleum Corporation LEASE Sacra SA WELL NO. 9

LOCATION: Unit M Section 19 Township 6S Range 26E

L 3742.0 H 3742.0 L/H 1.000 G .642 %CO₂ .03 %N₂ 5.23 %H₂S 0.00

d 1.995 Fr .017777 GH 2402.4 Pcr 661.9 Tcr 355.2

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.171	.309	.351	.383	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.)	.887	.917	.923	.932	0.000
6 TZ	484.5	500.8	504.2	508.8	0.0
7 GH/TZ	4.958	4.797	4.765	4.721	0.000
8 e ^s (Table XIV)	1.204	1.197	1.196	1.194	0.000
9 1-e ^{-s} (Table XIV)	.170	.165	.164	.162	0.000
10 Pt	819.2	591.2	545.2	483.2	0.0
11 Pt ² /1000	671.1	349.5	297.2	233.5	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.613	8.905	8.962	9.047	0.000
14 FcQm	1.474	2.752	3.148	3.464	0.000
15 L/H(FcQm) ²	2.173	7.574	9.913	12.001	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.369	1.247	1.622	1.947	0.000
17 Pw ² =Pt ² +Fw	671.5	350.8	298.9	235.4	0.0
18 Ps ² =e ^s Pw ²	808.7	419.9	357.3	281.0	0.0
19 Ps	899.3	648.0	597.8	530.1	0.0
20 P=(Pt+Ps)/2	859.2	619.6	571.5	506.7	0.0
21 Pr=(P/Pcr)	1.30	.94	.86	.77	0.00
22 Tr=(T/Tcr)	1.54	1.54	1.54	1.54	0.00
23 Z(Table XI)	.887	.917	.923	.932	0.000

Company	Yates Petroleum Corporation
Well	Sacra SA No. 9
Location	M, 19-6S-26E
County	Chaves
Date	7/18/88

