

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

c/sr
File
RECEIVED
SEP 08 '87
O. C. D.
ARTESIA, OFFICE

Type Test [x] Initial [] Annual [] Special					Test Date 05/05/87	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company	
Pool Undesignated					Unit Cisco	
Completion Date 06/28/84		Total Depth 8500.0'		Plug Back TD 6251.0'		
Csg Size 5.500"		Wt. 14.000#		Elevation 3831.0'		
d 5.012"		Set At 8500.0'		Perforations: From 6162.0' To 6251.0'		
Tbg Size 2.875"		Wt. 6.500#		Perforations: From 6162.0' To 6251.0'		
d 2.441"		Set At 6107.0'		Unit Sec Twp Rge I 13 19S 23E		
Type Well Single					Packer Set At 6107.0'	
Producing Thru Tubing					County Eddy	
Resv. Temp. °F 142 @ 6191'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		
L 6107.0'		H 6107.0'		State New Mexico		
Gg .611		%CO2 .49		%N2 .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	77	1613	0	0	0	0 hrs.
1.	2.067 X 1.250	225	13.0	76	1350	62	0	0	24 hrs.
2.	2.067 X 1.250	230	25.7	76	1298	62	0	0	24 hrs.
3.	2.067 X 1.250	270	36.5	77	930	62	0	0	24 hrs.
4.	2.067 X 1.250	320	44.4	77	623	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)	$\sqrt{hwP_m}$	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	8.134	55.65	238.20	.985	1.279	1.017	580
2.	8.134	79.06	243.20	.985	1.279	1.017	824
3.	8.134	101.67	283.20	.984	1.279	1.020	1062
4.	8.134	121.63	333.20	.984	1.279	1.024	1276
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Pr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio
1.	.35	536	1.50	.967	128.000 Mcf/bbl.
2.	.36	536	1.50	.966	A.P.I. Gravity of Liquid Hydrocarbons 62.000 Deg.
3.	.42	537	1.51	.960	Specific Gravity Separator Gas .611
4.	.50	537	1.51	.953	Specific Gravity Flowing Fluid .633
5.	0.00	0	0.00	0.000	Critical Pressure 672.4 PSIA
					Critical Temperature 356.5°R

Pc 1626.2		Pc ² 2644.5			
NO	Pt ²	Pw	Pw ²	Pc ² -Pw ²	(1) $\frac{Pc^2}{Pc^2-Pw^2} = \frac{1.1871}{}$ (2) $\left[\frac{Pc^2}{Pc^2-Pw^2}\right]^n = \frac{1.1382}{}$
1.	1858.3	1364.0	1860.5	784.1	ROF = Q $\left[\frac{Pc^2}{Pc^2-Pw^2}\right]^n = \frac{1452 \text{ Mcfd}}{}$
2.	1719.2	1312.9	1723.6	920.9	
3.	889.6	947.2	897.3	1747.3	
4.	404.8	645.2	416.3	2228.2	
5.	0.0	0.0	0.0	0.0	

$$AOF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 1452 \text{ Mcfd}$$

Absolute Open Flow 1452 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .755
Remarks:

Approved By:	Conducted By: Tracy Richardson	Calculated By:	Checked By:
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WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 09/04/87

COMPANY Yates Petroleum Corporation LEASE Triangle Ranch YK WELL NO. 1

LOCATION: Unit I Section 13 Township 19S Range 23E

L 6107.0 H 6107.0 L/H 1.000 G .633 %CO₂ .49 %N₂ .82 %H₂S 0.00

d 2.441 Fr .010495 GH 3866.5 Pcr 671.6 Tcr 363.8

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.580	.824	1.062	1.276	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	602.0	602.0	602.0	602.0	0.0
4 T=(Tw+Ts)/2	562.0	562.0	562.0	562.0	0.0
5 Z(Est.)	.830	.834	.873	.911	0.000
6 TZ	466.3	468.9	490.5	512.0	0.0
7 GH/TZ	8.291	8.247	7.883	7.552	0.000
8 e ^s (Table XIV)	1.365	1.362	1.344	1.327	0.000
9 1-e ^s (Table XIV)	.267	.266	.256	.247	0.000
10 Pt	1363.2	1311.2	943.2	636.2	0.0
11 Pt ² /1000	1858.3	1719.2	889.6	404.8	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	4.894	4.921	5.148	5.373	0.000
14 FcQm	2.839	4.057	5.469	6.856	0.000
15 L/H(FcQm) ²	8.060	16.458	29.909	47.005	0.000
16 Fw=L/H(FcQm) ² (1-e ^s)	2.154	4.378	7.654	11.593	0.000
17 Pw ² =Pt ² +Fw	1860.5	1723.6	897.3	416.3	0.0
18 Ps ² =e ^s Pw ²	2539.0	2348.2	1205.9	552.6	0.0
19 Ps	1593.4	1532.4	1098.1	743.4	0.0
20 P=(Pt+Ps)/2	1478.3	1421.8	1020.7	689.8	0.0
21 Pr=(P/Pcr)	2.20	2.12	1.52	1.03	0.00
22 Tr=(T/Tcr)	1.54	1.54	1.54	1.54	0.00
23 Z(Table XI)	.830	.834	.873	.911	0.000

Company	Yates Petroleum Corporation
Well	Triangle Ranch YK No. 1
Location	I, 13-19S-23E
County	Eddy
Date	09/04/87

