

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

Form C-122

CSP
File

Type Test [x] Initial [] Annual [] Special				Test Date 4/4/88			
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company		MAY 04 '88	
Pool Undesignated				Formation Permo Penn		Unit O. C. D. ARTESIA, OFFICE	
Completion Date 9/30/82		Total Depth 8975.0'		Plug Back TD 6963.0'		Elevation 3712.0'	
Csg Size 4.500" 9.500#		d 4.090"		Set At 8975.0'		Perforations: From 6270.0' To 6940.0'	
Tbg Size 2.375" 4.700#		d 1.995"		Set At 6865.0'		Perforations: From 0.0' To 0.0'	
Type Well Single				Packer Set At 16209.0'		County Eddy	
Producing Thru Tubing		Resv. Temp. °F 130 @ 6520'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
L 6865.0'		H 6865.0'		Gg .656		%CO2 .80	
				%N2 2.75		%H2S 0.00	
				Prover 0.000"		Meter Run 2.000"	
						Taps Flange	

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow	
NO	Prover Size	Orifice 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	40	1900	0	0	0	0 hrs.
1.	2.067	X .625	230	9.0	40	1585	62	0	0	24 hrs.
2.	2.067	X .625	240	12.0	40	1435	62	0	0	24 hrs.
3.	2.067	X .625	250	20.3	40	1270	62	0	0	24 hrs.
4.	2.067	X .625	260	30.0	40	980	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)	1/hwPm	Pressure Pm	Flow Temp Factor Ft.	Gravity Factor Fg	Super Compress. Fact. Fpv	Rate of Flow Q, Mcfd
1.	1.866	46.78	243.20	1.020	1.235	1.025	113
2.	1.866	55.12	253.20	1.020	1.235	1.026	133
3.	1.866	73.10	263.20	1.020	1.235	1.027	176
4.	1.866	90.53	273.20	1.020	1.235	1.028	219
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	Pr	Temp. °R	Tr	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	.36	500	1.37	.952	42.170 Mcf/bbl.	49.800 Deg.	.656	xxxxxxx	668.9 PSIA	365.4°R
2.	.38	500	1.37	.950					666.4 PSIA	389.4°R
3.	.39	500	1.37	.948						
4.	.41	500	1.37	.946						
5.	0.00	0	0.00	0.000						

Pc 1913.2 Pc2 3660.3			
NO	Pt2	Pw	Pw2
1.	2554.2	1598.3	2554.5
2.	2097.3	1448.3	2097.6
3.	1646.6	1283.5	1647.2
4.	986.4	993.7	987.5
5.	0.0	0.0	0.0

$$(1) \frac{Pc^2}{Pc^2 - Pw^2} = 1.3679$$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 277 \text{ Mcfd}$$

$$(2) \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.2653$$

Absolute Open Flow 277 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .751

Remarks:

Approved By:	Conducted By: Tracy Richardson	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 5/3/88

COMPANY Yates Petroleum Corporation LEASE Emma QE Com WELL NO. 2

LOCATION: Unit 0 Section 21 Township 9S Range 24E

L 6865.0 H 6865.0 L/H 1.000 G .729 %CO₂ .80 %N₂ 2.75 %H₂S 0.00

d 1.995 Fr .017777 GH 5002.2 Pcr 666.4 Tcr 389.4

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.113	.133	.176	.219	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	590.0	590.0	590.0	590.0	0.0
4 T=(Tw+Ts)/2	556.0	556.0	556.0	556.0	0.0
5 Z(Est.)	.739	.751	.770	.814	0.000
6 TZ	410.7	417.8	428.3	452.5	0.0
7 GH/TZ	12.178	11.974	11.679	11.056	0.000
8 e ^s (Table XIV)	1.579	1.567	1.549	1.514	0.000
9 1-e ^{-s} (Table XIV)	.367	.362	.355	.339	0.000
10 Pt	1598.2	1448.2	1283.2	993.2	0.0
11 Pt ² /1000	2554.2	2097.3	1646.6	986.4	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	7.302	7.427	7.615	8.044	0.000
14 FcQm	.823	.987	1.343	1.759	0.000
15 L/H(FcQm) ²	.677	.974	1.805	3.096	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.248	.352	.640	1.051	0.000
17 Pw ² =Pt ² +Fw	2554.5	2097.6	1647.2	987.5	0.0
18 Ps ² =e ^s Pw ²	4032.9	3286.3	2552.3	1494.8	0.0
19 Ps	2008.2	1812.8	1597.6	1222.6	0.0
20 P=(Pt+Ps)/2	1803.2	1630.5	1440.4	1107.9	0.0
21 Pr=(P/Pcr)	2.71	2.45	2.16	1.66	0.00
22 Tr=(T/Tcr)	1.43	1.43	1.43	1.43	0.00
23 Z(Table XI)	.739	.751	.770	.814	0.000

Company	Yates Petroleum Corporation
Well	Emma QE Com No. 2
Location	O, 21-9S-24E
County	Eddy
Date	5/3/88

