

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

RECEIVED

Form C-13

OCT 29 1991

O. C. D.

ARTESIA OFFICE

Type Test [x] Initial [] Annual [] Special				Test Date 1/8/90			
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company			
Pool Abo				Formation South Pecos Slope		Unit	
Completion Date 10/22/82		Total Depth 4750.0'		Plug Back TD 4687.0'		Elevation 3731.2'	
Farm or Lease Name Comanche Hill VE							
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 4750.0'	Perforations: From 4412.0' To 4447.0'		Well No. 1	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 4379.0'	Perforations: From 0.0' To 0.0'		Unit Sec Twp Rge B 36 10S 25E	
Type Well Single				Packer Set At 4380.0'		County Chaves	
Producing Thru Tubing		Resv. Temp. °F 116 @ 4372'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.	
State New Mexico							
L 4379.0'	H 4379.0'	Gg .653	%CO2 .02	%N2 3.85	%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	63	650	0	0	0	0 hrs.
1.	2.067 X 1.000	450	5.2	58	542	62	0	0	24 hrs.
2.	2.067 X 1.000	440	9.3	61	466	62	0	0	24 hrs.
3.	2.067 X 1.000	400	14.3	63	439	62	0	0	24 hrs.
4.	2.067 X 1.000	340	25.0	64	350	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.	4.947	49.08	463.20	1.002	1.237	1.043	314
2.	4.947	64.92	453.20	.999	1.237	1.041	413
3.	4.947	76.87	413.20	.997	1.237	1.037	486
4.	4.947	93.97	353.20	.996	1.237	1.031	591
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	Mcfd/bbl.
1.	.70	518	1.43	.920	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.68	521	1.44	.923	Specific Gravity Separator Gas	.653	xxxxxxxxxxxxxx
3.	.62	523	1.44	.931	Specific Gravity Flowing Fluid	xxxxxx	.653
4.	.53	524	1.44	.941	Critical Pressure	663.8	PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	362.7	°R

Pc	663.2	Pc ²	439.8				
NO	Pt ²	Pw	Pw ²	Pc ² -Pw ²	(1)	$\frac{Pc^2}{Pc^2-Pw^2} = \frac{1.4592}{}$	(2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = \frac{1.3281}{}$
1.	308.2	556.6	309.8	130.1			
2.	229.6	482.0	232.3	207.5			
3.	204.5	456.3	208.2	231.6			
4.	131.9	370.8	137.5	302.4			
5.	0.0	0.0	0.0	0.0			

ROF = Q $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = \frac{784 \text{ Mcfd}}{}$

$$AOF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 784 \text{ Mcfd}$$

Absolute Open Flow 784 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .751
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 10/29/91

COMPANY Yates Petroleum Corporation LEASE Comanche Hill VE WELL NO. 1

LOCATION: Unit B Section 36 Township 10S Range 25E

L 4379.0 H 4379.0 L/H 1.000 G .653 %CO₂ .02 %N₂ 3.85 %H₂S 0.00

d 1.995 Fr .017777 GH 2859.5 Pcr 663.8 Tcr 362.7

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.314	.413	.486	.591	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	576.0	576.0	576.0	576.0	0.0
4 T=(Tw+Ts)/2	549.0	549.0	549.0	549.0	0.0
5 Z(Est.)	.917	.928	.932	.945	0.000
6 TZ	503.5	509.6	511.7	518.9	0.0
7 GH/TZ	5.679	5.611	5.588	5.510	0.000
8 e ^s (Table XIV)	1.237	1.234	1.233	1.229	0.000
9 1-e ^{-s} (Table XIV)	.192	.190	.189	.187	0.000
10 Pt	555.2	479.2	452.2	363.2	0.0
11 Pt ² /1000	308.2	229.6	204.5	131.9	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.954	9.061	9.099	9.226	0.000
14 FcQm	2.811	3.745	4.426	5.450	0.000
15 L/H(FcQm) ²	7.902	14.028	19.589	29.703	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	1.515	2.661	3.702	5.544	0.000
17 Pw ² =Pt ² +Fw	309.8	232.3	208.2	137.5	0.0
18 Ps ² =e ^s Pw ²	383.3	286.7	256.7	169.0	0.0
19 Ps	619.1	535.4	506.7	411.1	0.0
20 P=(Pt+Ps)/2	587.1	507.3	479.4	387.2	0.0
21 Pr=(P/Pcr)	.88	.76	.72	.58	0.00
22 Tr=(T/Tcr)	1.51	1.51	1.51	1.51	0.00
23 Z(Table XI)	.917	.928	.932	.945	0.000

Company	Yates Petroleum Corporation
Well	Comanche Hill VE No. 1
Location	B, 36-10S-25E
County	Chaves
Date	10/29/91

$P_c - P_w$, THOUSANDS

