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

O. C. D.
ARTESIA OFFICE-122

Type Test [x] Initial [] Annual [] Special					Test Date 6/14/90				
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company					
Pool Abo				Formation Pecos Slope				Unit	
Completion Date 6/1/84		Total Depth 3900.0'		Plug Back TD 3837.0'		Elevation 3577.0'		Farm or Lease Name Summers Com	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 3900.0'	Perforations: From 3374.0' To 3378.0'				Well No. 1	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 3327.0'	Perforations: From 0.0' To 0.0'				Unit Sec Twp Rge 0 14 9S 24E	
Type Well Single					Packer Set At 3327.0'			County Chaves	
Producing Thru Tubing		Resv. Temp. °F 106 @ 3376'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 3327.0'	H 3327.0'	Gg .641	%CO2 0.00	%N2 9.83	%H2S 0.00	Prover 0.000"	Meter Run 2.000"	Taps Flange	

NO	FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
	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	98	1048	0	0	0	0 hrs.
1.	2.067	X .625	150	8.3	99	780	62	0	0	24 hrs.
2.	2.067	X .625	150	11.5	103	698	62	0	0	24 hrs.
3.	2.067	X .625	145	18.4	98	616	62	0	0	24 hrs.
4.	2.067	X .625	145	19.0	97	510	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	36.80	163.20	.964	1.249	1.009	84
2.	1.866	43.32	163.20	.961	1.249	1.009	98
3.	1.866	53.95	158.20	.965	1.249	1.009	123
4.	1.866	54.83	158.20	.966	1.249	1.009	125
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.	.25	559	1.63	.982	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.25	563	1.65	.982	Specific Gravity Separator Gas	.641	xxxxxx
3.	.24	558	1.63	.982	Specific Gravity Flowing Fluid	xxxxxx	.641
4.	.24	557	1.63	.982	Critical Pressure	654.1	PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	342.0	°R

Pc 1061.2 Pc2 1126.1					
NO	Pt2	Pw	Pw2	Pc2-Pw2	(1) $\frac{Pc^2}{Pc^2-Pw^2} = \frac{1.3189}{}$ (2) $\left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = \frac{1.2283}{}$
1.	629.2	793.3	629.2	496.9	ROF = $Q \left[\frac{Pc^2}{Pc^2-Pw^2} \right]^n = \frac{153 \text{ Mcfd}}{}$
2.	505.8	711.3	505.9	620.2	
3.	395.9	629.3	396.1	730.1	
4.	273.7	523.4	273.9	852.2	
5.	0.0	0.0	0.0	0.0	

$$ROF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 153 \text{ Mcfd}$$

Absolute Open Flow 153 Mcfd @ 15.025 Angle of Slope, 0 37 Slope, n .743
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 5/8/91

COMPANY Yates Petroleum Corporation LEASE Summers Com WELL NO. 1

LOCATION: Unit 0 Section 14 Township 9S Range 24E

L 3327.0 H 3327.0 L/H 1.000 G .641 %CO₂ 0.00 %N₂ 9.83 %H₂S 0.00

d 1.995 Fr .017777 GH 2132.6 Pcr 654.1 Tcr 342.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.084	.098	.123	.125	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	566.0	566.0	566.0	566.0	0.0
4 T=(Tw+Ts)/2	544.0	544.0	544.0	544.0	0.0
5 Z(Est.)	.903	.912	.922	.934	0.000
6 TZ	491.3	496.3	501.5	508.4	0.0
7 GH/TZ	4.341	4.297	4.253	4.195	0.000
8 e ^s (Table XIV)	1.177	1.175	1.173	1.170	0.000
9 1-e ^{-s} (Table XIV)	.150	.149	.147	.146	0.000
10 Pt	793.2	711.2	629.2	523.2	0.0
11 Pt ² /1000	629.2	505.8	395.9	273.7	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.734	8.823	8.917	9.037	0.000
14 FcQm	.729	.864	1.092	1.126	0.000
15 L/H(FcQm) ²	.532	.747	1.193	1.268	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.080	.111	.176	.185	0.000
17 Pw ² =Pt ² +Fw	629.2	505.9	396.1	273.9	0.0
18 Ps ² =e ^s Pw ²	740.5	594.4	464.5	320.6	0.0
19 Ps	860.5	771.0	681.6	566.2	0.0
20 P=(Pt+Ps)/2	826.9	741.1	655.4	544.7	0.0
21 Pr=(P/Pcr)	1.26	1.13	1.00	.83	0.00
22 Tr=(T/Tcr)	1.59	1.59	1.59	1.59	0.00
23 Z(Table XI)	.903	.912	.922	.934	0.000

Company	Yates Petroleum Corporation
Well	Summers Com No. 1
Location	O, 14-9S-24E
County	Chaves
Date	5/8/91

