

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

Form C-122

RECEIVED

CLSP
F. H.

Type Test [x] Initial [] Annual [] Special				Test Date 12/22/88		JAN 23 '90	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline Company			O. C. D.	
Pool South Pecos Slope			Formation Abo			Unit ARTESIA, OFFICE	
Completion Date 3/19/88		Total Depth 5050.0'		Plug Back TD 4978.0'		Elevation 3775.2'	
Csg Size 4.500"		Wt. 9.500#		d 4.090"		Set At 5041.0'	
Tbg Size 2.375"		Wt. 4.700#		d 1.995"		Set At 4573.0'	
Perforations: From 4640.0' To 4837.0'		Perforations: From 0.0' To 0.0'		Farm or Lease Name Night Owl AFG State		Well No. 1	
Unit Sec G 22		Twp 9S		Rge 26E		County Chaves	
State New Mexico		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	56	760	0	0	0	0 hrs.
1.	2.067 X 1.000	670	5.1	57	722	62	0	0	24 hrs.
2.	2.067 X 1.000	600	10.2	53	702	62	0	0	24 hrs.
3.	2.067 X 1.000	540	15.3	56	697	62	0	0	24 hrs.
4.	2.067 X 1.000	500	16.0	55	690	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	59.03	683.20	1.003	1.244	1.062	387
2.	4.947	79.09	613.20	1.007	1.244	1.056	518
3.	4.947	92.00	553.20	1.004	1.244	1.049	597
4.	4.947	90.62	513.20	1.005	1.244	1.046	586
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.	1.03	517	1.45	.887	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.93	513	1.44	.896	Specific Gravity Separator Gas	.646	xxxxxx
3.	.84	516	1.45	.908	Specific Gravity Flowing Fluid	xxxxxx	.646
4.	.78	515	1.44	.914	Critical Pressure	661.9 PSIA	661.9 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	356.6°R	356.6°R

Pc 773.2		Pc2 597.8	
NO	Pt2	Pw	Pw2
1.	540.5	736.8	542.8
2.	511.5	718.1	515.6
3.	504.4	714.0	509.8
4.	494.5	706.9	499.8
5.	0.0	0.0	0.0

$$(1) \frac{Pc2}{Pc2-Pw2} = \frac{6.1067}{(2) \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 3.6858}$$

$$AOF = Q \left[\frac{Pc2}{Pc2-Pw2} \right]^n = 2161 \text{ Mcfd}$$

Absolute Open Flow 2161 Mcfd @ 15.025 Angle of Slope, 0 36 Slope, n .721
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 1/22/90

COMPANY Yates Petroleum Corporation LEASE Night Owl AFG State WELL NO. 1

LOCATION: Unit G Section 22 Township 9S Range 26E

L 4573.0 H 4573.0 L/H 1.000 G .646 %CO₂ .04 %N₂ 5.18 %H₂S 0.00

d 1.995 Fr .017777 GH 2954.2 Pcr 661.9 Tcr 356.6

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.387	.518	.597	.586	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	569.0	569.0	569.0	569.0	0.0
4 T=(Tw+Ts)/2	545.5	545.5	545.5	545.5	0.0
5 Z(Est.)	.895	.898	.898	.899	0.000
6 TZ	488.2	489.7	490.0	490.5	0.0
7 GH/TZ	6.051	6.033	6.029	6.023	0.000
8 e ^{-s} (Table XIV)	1.255	1.254	1.254	1.253	0.000
9 1-e ^{-s} (Table XIV)	.203	.202	.202	.202	0.000
10 Pt	735.2	715.2	710.2	703.2	0.0
11 Pt ² /1000	540.5	511.5	504.4	494.5	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.679	8.710	8.710	8.720	0.000
14 FcQm	3.357	4.510	5.197	5.112	0.000
15 L/H(FcQm) ²	11.271	20.340	27.005	26.130	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.288	4.116	5.465	5.283	0.000
17 Pw ² =Pt ² +Fw	542.8	515.6	509.8	499.8	0.0
18 Ps ² =e ^s Pw ²	681.1	646.4	639.2	626.4	0.0
19 Ps	825.3	804.0	799.5	791.5	0.0
20 P=(Pt+Ps)/2	780.2	759.6	754.8	747.3	0.0
21 Pr=(P/Pcr)	1.18	1.15	1.14	1.13	0.00
22 Tr=(T/Tcr)	1.53	1.53	1.53	1.53	0.00
23 Z(Table XI)	.895	.898	.898	.899	0.000

Company	Yates Petroleum Corporation
Well	Night Owl AFG State No. 1
Location	G, 22-9S-26E
County	Chaves
Date	1/22/90

