

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

RECEIVED-122

dsr
File

JAN 23 '90

Type Test [x] Initial [] Annual [] Special				Test Date 1/4/89		O. C. D.			
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company				ARTESIA, OFFICE	
Pool West Pecos Slope				Formation Abo				Unit	
Completion Date 8/6/83		Total Depth 3250.0'		Plug Back TD 3193.0'		Elevation 3868.0'		Farm or Lease Name Bajillo Draw WQ St	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 3245.0'	Perforations: From 2790.0' To 2904.0'				Well No. 3	
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 2745.0'	Perforations: From 0.0' To 0.0'				Unit Sec Twp Rge B 28 7S 23E	
Type Well Single				Packer Set At 2745.0'		County Chaves			
Producing Thru Tubing		Resv. Temp. °F 102 @ 2729'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 2745.0'	H 2745.0'	Gg .612	%CO2 .02	%N2 7.27	%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	61	580	0	0	0	0 hrs.
1.	2.067	X .750	290	3.0	63	545	62	0	0	24 hrs.
2.	2.067	X .750	290	5.2	62	518	62	0	0	24 hrs.
3.	2.067	X .750	280	10.2	61	498	62	0	0	24 hrs.
4.	2.067	X .750	280	21.0	65	440	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 P _m	Flow Temp Factor F _t	Gravity Factor F _g	Super Compress. Fact. F _{pv}	Rate of Flow Q, Mcfd
1.	2.709	30.16	303.20	.997	1.278	1.021	106
2.	2.709	39.71	303.20	.998	1.278	1.021	140
3.	2.709	54.69	293.20	.999	1.278	1.020	193
4.	2.709	78.47	293.20	.995	1.278	1.020	276
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.	.46	523	1.54	.960	A.P.I. Gravity of Liquid Hydrocarbons	0.000	Deg.
2.	.46	522	1.54	.959	Specific Gravity Separator Gas	.612	xxxxxxxxxxxxxx
3.	.44	521	1.53	.961	Specific Gravity Flowing Fluid	xxxxxx	.612
4.	.44	525	1.55	.962	Critical Pressure	659.5	PSIA 659.5 PSIA
5.	0.00	0	0.00	0.000	Critical Temperature	339.6°R	339.6°R

Pc	593.2	Pc2	351.9				
NO	Pt2	Pw	Pw2	Pc2-Pw2	(1) $\frac{Pc^2}{Pc^2-Pw^2}$	=	2.4119
1.	311.6	558.3	311.7	40.2	(2) $\left[\frac{Pc^2}{Pc^2-Pw^2}\right]^n$	=	1.9180
2.	282.2	531.4	282.4	69.5			
3.	261.3	511.5	261.7	90.2			
4.	205.4	454.0	206.1	145.8			
5.	0.0	0.0	0.0	0.0			

$$ROF = Q \left[\frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 529 \text{ Mcfd}$$

Absolute Open Flow 529 Mcfd @ 15.025 Angle of Slope, 0 36 Slope, n .740
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 Bajillo Draw W0 St WELL NO. 3

LOCATION: Unit B Section 28 Township 7S Range 23E

L 2745.0 H 2745.0 L/H 1.000 G .612 %CO₂ .02 %N₂ 7.27 %H₂S 0.00

d 1.995 Fr .017777 GH 1679.9 Pcr 659.5 Tcr 339.6

LINE		1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1	Qm	.106	.140	.193	.276	0.000
2	Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3	Ts(B.H.°R)	562.0	562.0	562.0	562.0	0.0
4	T=(Tw+Ts)/2	542.0	542.0	542.0	542.0	0.0
5	Z(Est.)	.932	.935	.938	.945	0.000
6	TZ	505.3	507.0	508.3	512.0	0.0
7	GH/TZ	3.325	3.314	3.305	3.281	0.000
8	e ^s (Table XIV)	1.133	1.132	1.132	1.131	0.000
9	1-e ^{-s} (Table XIV)	.117	.117	.117	.116	0.000
10	Pt	558.2	531.2	511.2	453.2	0.0
11	Pt ² /1000	311.6	282.2	261.3	205.4	0.0
12	Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13	Fc=FrTZ	8.983	9.012	9.036	9.102	0.000
14	FcQm	.955	1.263	1.744	2.510	0.000
15	L/H(FcQm) ²	.912	1.595	3.043	6.302	0.000
16	Fw=L/H(FcQm) ² (1-e ^{-s})	.107	.186	.355	.730	0.000
17	Pw ² =Pt ² +Fw	311.7	282.4	261.7	206.1	0.0
18	Ps ² =e ^s Pw ²	353.1	319.7	296.2	233.1	0.0
19	Ps	594.2	565.4	544.2	482.8	0.0
20	P=(Pt+Ps)/2	576.2	548.3	527.7	468.0	0.0
21	Pr=(P/Pcr)	.87	.83	.80	.71	0.00
22	Tr=(T/Tcr)	1.60	1.60	1.60	1.60	0.00
23	Z(Table XI)	.932	.935	.938	.945	0.000

Company	Yates Petroleum Corporation
Well	Bajillo Draw WQ St No. 3
Location	B, 28-7S-23E
County	Chaves
Date	1/22/90

$P_c^2 - P_w^2$, THOUSANDS

