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O. C. D.
ARTESIA OFFICE
Form C-122NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 5/27/88				
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company					
Pool Wolfcamp				Formation Foor Ranch				Unit	
Completion Date 5/10/88		Total Depth 6229.0'		Plug Back TD 6188.0'		Elevation 3802.7'		Farm or Lease Name Witz VN State	
Csg Size 5.500"	Wt. 14.000#	d 5.012"	Set At 6229.0'	Perforations: From 5265.0' To 5274.0'			Well No. 2		
Tbg Size 2.875"	Wt. 6.500#	d 2.441"	Set At 5948.0'	Perforations: From 0.0' To 0.0'			Unit Sec Twp Rge A 26 9S 26E		
Type Well Single				Packer Set At 5948.0'			County Chaves		
Producing Thru Tubing		Resv. Temp. °F 138 @ 6087'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 5948.0'	H 5948.0'	Gg .643	%CO2 .02	%N2 5.30	%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	77	1462	0	0	0	0 hrs.
1.	2.067 X 1.000	260	7.9	79	1167	62	0	0	24 hrs.
2.	2.067 X 1.000	260	16.5	81	869	62	0	0	24 hrs.
3.	2.067 X 1.000	275	20.1	77	799	62	0	0	24 hrs.
4.	2.067 X 1.000	290	23.0	78	670	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.	4.947	46.46	273.20	.982	1.247	1.020	287		
2.	4.947	67.14	273.20	.980	1.247	1.019	414		
3.	4.947	76.11	288.20	.984	1.247	1.021	472		
4.	4.947	83.51	303.20	.983	1.247	1.022	518		
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.	.41	539	1.52	.962	A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg.				
2.	.41	541	1.52	.963	Specific Gravity Separator Gas .643 xxxxxxxxxxxxxxx				
3.	.44	537	1.51	.959	Specific Gravity Flowing Fluid xxxxxx .643				
4.	.46	538	1.51	.957	Critical Pressure 661.7 PSIA 661.7 PSIA				
5.	0.00	0	0.00	0.000	Critical Temperature 355.3°R 355.3°R				
P _c 1475.2 P _c ² 2176.2									
NO	P _t ²	P _w	P _w ²	P _c ² -P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2725$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1995$				
1.	1392.9	1180.4	1393.4	782.8	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 621$ Mcfd				
2.	778.3	882.9	779.4	1396.8					
3.	659.7	813.1	661.2	1515.0					
4.	466.8	684.6	468.6	1707.6					
5.	0.0	0.0	0.0	0.0					
Absolute Open Flow					621 Mcfd @ 15.025		Angle of Slope, θ		37
Slope, n					.755				
Remarks:									
Approved By:			Conducted By: David Weaver		Calculated By: Andrea Carpenter		Checked By:		

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 5/8/91

COMPANY Yates Petroleum Corporation LEASE Witz VN State WELL NO. 2

LOCATION: Unit A Section 26 Township 9S Range 26E

L 5948.0 H 5948.0 L/H 1.000 G .643 %CO₂ .02 %N₂ 5.30 %H₂S 0.00

d 2.441 Fr .010495 GH 3824.6 Pcr 661.7 Tcr 355.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.287	.414	.472	.518	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	598.0	598.0	598.0	598.0	0.0
4 T=(Tw+Ts)/2	560.0	560.0	560.0	560.0	0.0
5 Z(Est.)	.857	.888	.896	.911	0.000
6 TZ	480.0	497.1	501.6	510.1	0.0
7 GH/TZ	7.969	7.694	7.625	7.497	0.000
8 e ^s (Table XIV)	1.348	1.334	1.331	1.324	0.000
9 1-e ^{-s} (Table XIV)	.258	.251	.249	.245	0.000
10 Pt	1180.2	882.2	812.2	683.2	0.0
11 Pt ² /1000	1392.9	778.3	659.7	466.8	0.0
12 Fr(Table XV)	.010495	.010495	.010495	.010495	0.000000
13 Fc=FrTZ	5.037	5.217	5.268	5.357	0.000
14 FcQm	1.446	2.159	2.485	2.773	0.000
15 L/H(FcQm) ²	2.090	4.663	6.177	7.690	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	.540	1.169	1.535	1.884	0.000
17 Pw ² =Pt ² +Fw	1393.4	779.4	661.2	468.6	0.0
18 Ps ² =e ^s Pw ²	1878.7	1040.1	879.9	620.7	0.0
19 Ps	1370.7	1019.9	938.0	787.8	0.0
20 P=(Pt+Ps)/2	1275.4	951.0	875.1	735.5	0.0
21 Pr=(P/Pcr)	1.93	1.44	1.32	1.11	0.00
22 Tr=(T/Tcr)	1.58	1.58	1.58	1.58	0.00
23 Z(Table XI)	.857	.888	.896	.911	0.000

Company	Yates Petroleum Corporation
Well	Witz VN State No. 2
Location	R, 26-9S-26E
County	Chaves
Date	5/8/91

