

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

Form O-122

4/15/88
File

Type Test [x] Initial [] Annual [] Special					Test Date 4/12/88	
Company Yates Petroleum Corporation					Connection Transwestern Pipeline Company	
Pool <u>WILDCAT PENN</u> <u>Undesignated</u>					Formation Cisco	
Completion Date 10/15/85		Total Depth 9010.0'		Plug Back TD 8605.0'		
Elevation 3826.0'		Farm or Lease Name Agave AAJ State				
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 9002.0'	Perforations: From 6738.0' To 6756.0'		
Well No. 2						
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 8742.0'	Perforations: From 0.0' To 0.0'		
Unit Sec Top Rge K 32 196 24E						
Type Well Single				Packer Set At 8742.0'		
County Eddy						
Producing Thru Tubing		Resv. Temp. °F 145 @ 6747'		Mean Temp. °F 62.0		
Baro. Press. - Pa 13.2 psia.						
State New Mexico						
L 8742.0'	H 8742.0'	Gg .656	%CO2 .80	%N2 2.75	%H2S 0.00	
Proven 0.000"		Meter Run 2.000"		Taps Flange		

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO	Proven Orifice Size X Size	Press. psig	Diff. hw	Temp. °F	Press. psig	Temp. °F	Press. psig	Temp. °F	
S1	0.000 X 0.000	0	0.0	43	1600	0	0	0	0 hrs.
1.	2.067 X 1.125	270	6.0	43	1278	62	0	0	24 hrs.
2.	2.067 X 1.125	280	11.3	43	963	62	0	0	24 hrs.
3.	2.067 X 1.125	300	15.5	43	834	62	0	0	24 hrs.
4.	2.067 X 1.125	330	16.9	43	704	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)	$\sqrt{hw/P_m}$	Pressure P _m	Flow Temp Factor Ft.	Gravity Factor F _g	Super Compress. Fact. F _{pv}	Rate of Flow Q, Mcfd
1.	6.397	41.22	283.20	1.017	1.235	1.029	341
2.	6.397	57.56	293.20	1.017	1.235	1.030	476
3.	6.397	69.67	313.20	1.017	1.235	1.032	577
4.	6.397	76.16	343.20	1.017	1.235	1.035	633
5.	0.000	0.00	0.00	0.000	0.000	0.000	0

NO	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio
1.	.42	503	1.38	.945	15.300 Mcf/bbl.
2.	.44	503	1.38	.943	A.P.I. Gravity of Liquid Hydrocarbons 51.600 Deg.
3.	.47	503	1.38	.939	Specific Gravity Separator Gas .656
4.	.51	503	1.38	.933	Specific Gravity Flowing Fluid .847
5.	0.00	0	0.00	0.000	Critical Pressure 668.9 PSIA
					Critical Temperature 365.4°R
					662.2 PSIA
					428.6°R

P_c 1613.2 P_c² 2602.4

NO	P _t ²	P _w	P _w ²	P _c ² -P _w ² (1)	$\frac{P_{c^2}}{P_{c^2}-P_{w^2}} = 1.2428$	(2) $\left[\frac{P_{c^2}}{P_{c^2}-P_{w^2}} \right]^n = 1.1817$
1.	1667.2	1292.2	1669.9	932.6		
2.	953.0	979.2	958.9	1643.5		
3.	717.7	852.6	727.0	1875.4		
4.	514.4	725.4	526.2	2076.2		
5.	0.0	0.0	0.0	0.0		

$$AOF = Q \left[\frac{P_{c^2}}{P_{c^2}-P_{w^2}} \right]^n = 748 \text{ Mcfd}$$

Absolute Open Flow 748 Mcfd @ 15.025 Angle of Slope, 0 38 Slope, n .768

Remarks:

Approved By:	Conducted By: Tracy Richardson	Calculated By: Andrea Carpenter	Checked By:
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Adopted 9-1-65

DATE 5/2/88

COMPANY Yates Petroleum Corporation LEASE Agave AAJ State WELL NO. 2LOCATION: Unit K Section 32 Township 19S Range 24EL 8742.0 H 8742.0 L/H 1.000 G .847 %CO₂ .80 %N₂ 2.75 %H₂S 0.00d 1.995 Fr .017777 GH 7408.5 Pcr 662.2 Tcr 428.6

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.341	.476	.577	.633	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	605.0	605.0	605.0	605.0	0.0
4 T=(Tw+Ts)/2	563.5	563.5	563.5	563.5	0.0
5 Z(Est.)	.660	.726	.761	.798	0.000
6 TZ	371.9	408.8	428.7	449.8	0.0
7 GH/TZ	19.922	18.121	17.280	16.471	0.000
8 e ^s (Table XIV)	2.111	1.972	1.911	1.854	0.000
9 1-e ^{-s} (Table XIV)	.526	.493	.477	.461	0.000
10 Pt	1291.2	976.2	847.2	717.2	0.0
11 Pt ² /1000	1667.2	953.0	717.7	514.4	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	6.611	7.275	7.626	7.998	0.000
14 FcQm	2.251	3.463	4.404	5.064	0.000
15 L/H(FcQm) ²	5.068	11.994	19.391	25.647	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	2.667	5.910	9.244	11.815	0.000
17 Pw ² =Pt ² +Fw	1669.9	958.9	727.0	526.2	0.0
18 Ps ² =e ^s Pw ²	3524.6	1890.5	1389.2	975.7	0.0
19 Ps	1877.4	1375.0	1178.7	987.8	0.0
20 P=(Pt+Ps)/2	1584.3	1175.6	1012.9	852.5	0.0
21 Pr=(P/Pcr)	2.39	1.78	1.53	1.29	0.00
22 Tr=(T/Tcr)	1.31	1.31	1.31	1.31	0.00
23 Z(Table XI)	.660	.726	.761	.798	0.000

Company	Yates Petroleum Corporation
Well	Agave AAJ State No. 2
Location	K, 32-19S-24E
County	Eddy
Date	5/2/88

