

CISF
File

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

RECEIVED
Form C-122

APR 22 '88

Type Test [x] Initial [] Annual [] Special						Test Date 4/5/88		O. C. D. ARTESIA, OFFICE	
Company Yates Petroleum Corporation						Connection Transwestern Pipeline Company			
Pool/Well HOAG TANK MORROW UNDESIGNATED						Formation HOAG TANK MORROW		Unit	
Completion Date 8/24/82		Total Depth 9000.0'		Plug Back TD 8770.0'		Elevation 3691.0'		Farm or Lease Name ALLISON CO FED	
Csg Size 4.500"	Wt. 9.500#	d 4.090"	Set At 9000.0'	Perforations: From 8733.5' To 8739.0'		Well No. 9			
Tbg Size 2.375"	Wt. 4.700#	d 1.995"	Set At 8689.0'	Perforations: From 0.0' To 0.0'		Unit Sec D 15		Twp Rge 19S 24E	
Type Well Single						Packer Set At 8689.0'		County EDDY	
Producing Thru Tubing		Resv. Temp. °F 194 @ 8675'		Mean Temp. °F 62.0		Baro. Press. - Pa 13.2 psia.		State New Mexico	
L 8689.0'	H 8689.0'	Gg .600	%CO2 .69	%N2 .57	%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	73	2659	0	0	0	0 hrs.
1.	2.069 X 1.250	260	25.2	73	2324	62	0	0	24 hrs.
2.	2.069 X 1.250	245	29.5	73	2301	62	0	0	24 hrs.
3.	2.069 X 1.250	240	37.7	73	2267	62	0	0	24 hrs.
4.	2.069 X 1.250	230	45.0	73	2195	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.	8.131	82.97	273.20	.988	1.291	1.020	877		
2.	8.131	87.27	258.20	.988	1.291	1.018	921		
3.	8.131	97.70	253.20	.988	1.291	1.018	1031		
4.	8.131	104.61	243.20	.988	1.291	1.017	1103		
5.	0.000	0.00	0.00	0.000	0.000	0.000	0		
Gas Liquid Hydrocarbon Ratio Dry Mcf/bbl. A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg. Specific Gravity Separator Gas .600 Specific Gravity Flowing Fluid .600 Critical Pressure 674.0 PSIA Critical Temperature 353.3°R									
NO	Pr	Temp. °R	Tr	Z					
1.	.41	533	1.51	.962					
2.	.38	533	1.51	.964					
3.	.38	533	1.51	.965					
4.	.36	533	1.51	.967					
5.	0.00	0	0.00	0.000					
Pc 2672.2 Pc² 7140.7 NO Pt² Pw Pw² Pc²-Pw² (1) $\frac{Pc²}{Pc²-Pw²} = 3.1982$ (2) $\left[\frac{Pc²}{Pc²-Pw²} \right]^n = 2.4433$ 1. 5462.5 2341.4 5482.2 1658.5 2. 5355.5 2318.9 5377.2 1763.5 3. 5199.3 2286.1 5226.4 1914.2 4. 4876.1 2215.2 4907.2 2233.5 5. 0.0 0.0 0.0 0.0 AOF = Q $\left[\frac{Pc²}{Pc²-Pw²} \right]^n = 2696$ Mcfd									
Absolute Open Flow				2696 Mcfd @ 15.025		Angle of Slope, 0		38 Slope, n .768	
Remarks:									
Approved By:			Conducted By: TRACY RICHARDSON			Calculated By: ANDREA CARPENTER		Checked By:	

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

Adopted 9-1-65

DATE 4/21/88

COMPANY Yates Petroleum Corporation LEASE ALLISON CO FED WELL NO. 9

LOCATION: Unit D Section 15 Township 19S Range 24E

L 8689.0 H 8689.0 L/H 1.000 G .600 %CO₂ .69 %N₂ .57 %H₂S 0.00

d 1.995 Fr .017777 GH 5213.4 Pcr 674.0 Tcr 353.3

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	.877	.921	1.031	1.103	0.000
2 Tw(W.H.°R)	522.0	522.0	522.0	522.0	0.0
3 Ts(B.H.°R)	654.0	654.0	654.0	654.0	0.0
4 T=(Tw+Ts)/2	588.0	588.0	588.0	588.0	0.0
5 Z(Est.)	.850	.850	.849	.849	0.000
6 TZ	499.7	499.6	499.4	499.1	0.0
7 GH/TZ	10.433	10.436	10.439	10.445	0.000
8 e ^s (Table XIV)	1.479	1.479	1.479	1.480	0.000
9 1-e ^{-s} (Table XIV)	.324	.324	.324	.324	0.000
10 Pt	2337.2	2314.2	2280.2	2208.2	0.0
11 Pt ² /1000	5462.5	5355.5	5199.3	4876.1	0.0
12 Fr(Table XV)	.017777	.017777	.017777	.017777	0.000000
13 Fc=FrTZ	8.884	8.881	8.875	8.872	0.000
14 FcQm	7.792	8.184	9.152	9.789	0.000
15 L/H(FcQm) ²	60.711	66.972	83.754	95.820	0.000
16 Fw=L/H(FcQm) ² (1-e ^{-s})	19.656	21.689	27.138	31.055	0.000
17 Pw ² =Pt ² +Fw	5482.2	5377.2	5226.4	4907.2	0.0
18 Ps ² =e ^s Pw ²	8106.9	7952.6	7731.7	7260.3	0.0
19 Ps	2847.3	2820.0	2780.6	2694.5	0.0
20 P=(Pt+Ps)/2	2592.2	2567.1	2530.4	2451.4	0.0
21 Pr=(P/Pcr)	3.85	3.81	3.75	3.64	0.00
22 Tr=(T/Tcr)	1.66	1.66	1.66	1.66	0.00
23 Z(Table XI)	.850	.850	.849	.849	0.000

Company	Yates Petroleum Corporation
Well	ALLISON CQ FED No. 9
Location	D, 15-19S-24E
County	EDDY
Date	4/21/88

$P_c^2 - P_w^2$, THOUSANDS

