

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

O. C. D.
ARTESIA, OFFICE

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 5-28-82	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Company	
Pool Pecos Slope Abo				Formation Abo	
Completion Date 3-5-82		Total Depth 4300		Plug Back TD 4232	
Elevation 3745.7		Farm or Lease Name Doris RI Fed.			
Cog. Size 4 1/2"	Wt. 9.5#	d 4.090"	Set At 4299	Perforations: From 3912 To 3920	
Well No. 2					
Tub. Size 2 7/8	Wt. 4.7#	d 1.995	Set At 3893	Perforations: From To	
Unit C	Sec. 27	Twp. 5S	Range 25E		
Type Well - Single - Dradhead - G.G. or G.O. Multiple Single				Packer Set At None	
Producing Thru Tubing		Reservoir Temp. °F 100 @ 3893		Mean Annual Temp. °F 60	
Baro. Press. - P _a 13.2		State New Mexico			
L 3893	H 3893	Cg .659	% CO ₂ .89	% N ₂ 7.27	% H ₂ S 0
Prover --		Meter Run 2"		Taps Flanged	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							1008				1 Day
1.	2.067 x 1.125			380	31	68	810	60			24 Hrs.
2.	2.067 x 1.125			360	33	68	842	64			24 Hrs.
3.	2.067 x 1.125			320	27	68	864	62			24 Hrs.
4.	2.067 x 1.125			340	21	68	885	63			24 Hrs.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1	6.393	111.1	393.2	.9924	1.232	1.036	900
2	6.393	111.2	373.2	.9924	1.232	1.035	900
3	6.393	94.5	333.2	.9924	1.232	1.029	760
4	6.393	86.9	353.2	.9924	1.232	1.030	700
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.59	528	1.47	.932	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	.6	528	1.47	.934	Specific Gravity Separator Gas .659 X X X X X X X X
3	.5	528	1.47	.945	Specific Gravity Flowing Fluid X X X X X
4	.53	528	1.47	.942	Critical Pressure 661 P.S.I.A. _____ P.S.I.A.
5					Critical Temperature 358 R _____ R

P _c 1021.2 P _c ² 1042.8				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	677.7		688.8	354
2	732.2		742.8	300
3	769.9		777.8	265
4	806.4		812.8	230
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.9458$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1720$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.9121$

Absolute Open Flow 1720	Mcf @ 15.025	Angle of Slope 60	Slope, n 600
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Remarks: Static pressure by Bennett Wireline, flowing pressure by DWT Calculations.
Worksheet C-122D attached.

Approved By Division	Conducted By: David Weaver	Calculated By: Scott Yates	Checked By:
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(Pc² - P D²) (UNDERSHIFT PSI)

$Q_1 = 2150 \text{ MCF}$

$\log Q_1 = 3.3324$

$Q_2 = 540$

$\log Q_2 = 2.7324$

$N = .400$

1000

100

1 1.5 2 2.5 3 4 5 6 7 8 9 1000 1.5 2 2.5 3 4 5 6 7 8 9 1

Q (MCF/D)

Q_1

Q_2

AOE = 1720 MCF/D



