

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Copy 4-51
Revised 9-1-65

2-12-2

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 06/17/75		JUN 24 1975	
Company Atlantic Richfield Company				Connection Southern Union				D.C.C.	
Pool Avalon Atoka				Formation Atoka				Unit ARTESIA, OFFICE	
Completion Date 10/18/74		Total Depth 11140		Plug Back TD 10936		Elevation 3298 KB		Farm or Lease Name State BR	
Case Size 5-1/2	Wt. 15.50	d 4.950	Set At 11134	Perforations: From 10104 To 10108		Well No. #1			
Tag. Size 2-3/8	Wt. 4.7	d 1.995	Set At 10735	Perforations: From 10021 To Crossover		Unit K		Sec. 16	Twp. 21S
Type Well - Single - Bradenhead - G.G. or G.O. Multiple G.G.				Packer Set At 10020		County Eddy			
Producing Thru Tubing		Reservoir Temp. °F 226		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2		State New Mexico	
L 10021	H 10021	G _g 0.652	% CO ₂ 0.325	% N ₂ 0.847	% H ₂ S 0.00	Prover	Meter Run X	Taps Flg.	

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							3815	69	Pkr.		23.0
1.	4.0 x 1.500			653	4.0	77	3415	77			2.5
2.	4.0 x 1.500			659	11.1	87	2951	76			4.0
3.	4.0 x 1.500			660	20.7	87	2340	79			3.3
4.	4.0 x 1.500			651	30.1	80	1521	74			3.8
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 _{pv}	Rate of Flow Q, Mcfd
1	10.84	51.62	666.2	.9838	1.238	1.061	723.5
2	10.84	86.38	672.2	.9753	1.238	1.058	1196.3
3	10.84	118.19	673.2	.9753	1.238	1.058	1637.0
4	10.84	141.35	664.2	.9810	1.238	1.060	1972.8
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	63 Mcf/bbl.
1	.99	537	1.44	.888	A.P.I. Gravity of Liquid Hydrocarbons	55.9 Deg.
2	1.00	548	1.47	.895	Specific Gravity Separator Gas	.652 XXXXXXXXXX
3	1.00	547	1.47	.894	Specific Gravity Flowing Fluid	XXXXXX .699
4	.99	540	1.45	.890	Critical Pressure	670.0 P.S.I.A. 669.0 P.S.I.A.
5					Critical Temperature	372.1 R 385.1 R

P_c 3828.2 P_c² 14655.1

NO	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	12217.8	3482.2	12125.7	2529.4
2	8786.5	3017.8	9107.1	5547.9
3	5537.5	2403.2	5775.4	8879.7
4	2353.8	1608.0	2585.7	12069.4
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.214$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1338$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2237$

Absolute Open Flow	2237 Mcfd @ 15.025	Angle of Slope	57° 6'	Slope, n	.647
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Remarks: Calculated by computer.
Southern Union began taking gas on 06/05/75.

Approved By Commission:	Conducted By: J. Cogburn	Calculated By: R. E. Huff	Checked By: L. C. Hudry
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