

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

SEP 29 89

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9-19-89			
Company BETTIS BROTHERS INC. ✓				Connection PIPELINE				Q.C.D. ARTESIA, OFFICE	
Well Name CARLSBAD STRAWN SOUTH				Formation STRAWN				Unit	
Completion Date 7-17-89		Total Depth 12000		Plug Back TD 11020		Elevation 3352		Farm or Lease Name STATE 16	
Coq. Size 4.500	Wt. 11.6	d 4.000	Set At 11712.	Perforations: From 10392. To 10412.		Well No. 1			
Thq. Size 2.375	Wt. 4.7	d 1.995	Set At 10338.	Perforations: From 0. To 0.		Unit Sec. Twp. Rys. 16-23S-26E			
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE-GAS						Packer Set At 10338.		County EDDY	
Producing Thru TUBING		Reservoir Temp. °F 172 @ 10402		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 13.2		State NM	
L 10402.	H 10402.	Gg .645	% CO ₂ .40	% N ₂ .49	% H ₂ S .00	Prover .0	Meter Run 3.1	Taps FLANGE	

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							4198	60.			72.0
1.	3.07 X 1.875			689	7.0	108	4170	60	PKR		1.0
2.	3.07 X 1.875			684	10.6	108	4160	60	PKR		1.0
3.	3.07 X 1.875			680	19.5	96	4135	60	PKR		1.0
4.	3.07 X 1.875			687	44.6	92	4045	60	PKR		1.0
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	18.29	70.27	702.3	.9568	1.2451	1.0509	1609
2	18.29	85.86	696.8	.9568	1.2451	1.0505	1965
3	18.29	116.16	693.1	.9671	1.2451	1.0547	2698
4	18.29	176.66	700.4	.9706	1.2451	1.0569	4126
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NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	1.05	568	1.53	.906	79.5	55.5	.645	XXXXXX	671	371
2	1.04	568	1.53	.906				XXXXXX		
3	1.03	556	1.50	.899				XXXXXX		
4	1.04	552	1.49	.895				XXXXXX		
5										

NO.	P _r ²	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} =$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$
1	17499	4198.	17626.	108.	77.1043	20.2236
2	17416	4194.	17589.	146.		
3	17208	4184.	17504.	230.		
4	16469	4137.	17118.	616.		
5						

Absolute Open Flow <u>54563</u> Mcfd @ 15.025		Angle of Slope θ <u>55.3</u>		Slope, n <u>.692</u>	
Remarks: CHOKE SIZE: 1ST RATE 11/64 2ND RATE 12/64 3RD RATE 14/64 4TH RATE 17/64					
Approved By Division					
Conducted By: C & W WIRELINE, INC.		Calculated By: MAFF LEE		Checked By:	