

dst.
File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5/16/90			
Company BISON PETROLEUM INC.				Connection EL PASO NATURAL GAS					
Pool S. CRLSBD. ATOKA				Formation ATOKA GAS				Unit C	
Completion Date 5/11/90		Total Depth 12269		Plug Back TD 11490		Elevation 4130GL		Farm or Lease Name EDDY "GE" STATE	
Coq. Size 5.000	Wi. 18.0	d 4.276	Set At 12267	Perforations: From 10932 To 10942				Well No. 1	
Thq. Size 2.375	Wi. 4.7	d 1.995	Set At 10734	Perforations: From 0 To 0				Unit Sec. Twp. Rge. C SEC. 16 23S 27 E	
Type Well - Single - Brdenhead - G.G. or G.O. Multiple SINGLE GAS				Packer Set At 10734				County EDDY	
Producing thru TUBING		Reservoir Temp. °F 160 @ 10937		Mean Annual Temp. °F 60.0		Baro. Press. - P _g 13.2		State N.M.	
L 10937	H 10937	G _g .624	% CO ₂ 2.04	% N ₂ .63	% H ₂ S .00	Prover .0	Meter Run 4.0	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							4300	60			72.0
1.	4.03 X .750			409	2.3	90	4133	60	0	0	1.0
2.	4.03 X .750			422	6.3	92	3953	60	0	0	1.0
3.	4.03 X .750			422	10.2	92	3663	60	0	0	1.0
4.	4.03 X .750			422	18.5	91	3401	60	0	0	1.0
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. Compres. Factor, F _{pv}	Rate of Flow Q, Mcf/d
1	2.66	30.83	422.5	.9723	1.26659	1.0308	104
2	2.66	52.18	435.6	.9706	1.2659	1.0313	176
3	2.66	66.79	435.6	.9706	1.2659	1.0313	225
4	2.66	89.75	435.6	.9715	1.2659	1.0315	303
5							

NO.	P _g	Temp. °R	T _g	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	.62	550	1.52	.941	0	0	.624	XXXXXX	679	361
2	.64	552	1.53	.940				XXXXXX		
3	.64	552	1.53	.940						
4	.64	551	1.53	.940						
5										

P_c 4313.2 P_w 18604

NO.	P ₁ ²	P _w ²	P ₂ ²	P ₂ ² - P _w ²
1	17191	4150	17219	1385
2	15731	3969	15757	2847
3	13514	3679	13537	5066
4	11657	3417	11676	6927
5				

(1) $\frac{P_c^2}{P_2^2 - P_w^2} = 2.6856$ (2) $\left[\frac{P_c^2}{P_2^2 - P_w^2} \right]^n = 1.9237$

AOF = Q $\left[\frac{P_c^2}{P_2^2 - P_w^2} \right]^n = 583$

Absolute Open Flow	583	Mcf/d @ 15.025	Angle of Slope °	56.5	Slope, n	.662
--------------------	-----	----------------	------------------	------	----------	------

Remarks: DIAPHRAM ACTIVATED CHOKE

Approved By Division	Conducted By: BENNETT-CATHEY	Calculated By: MONTY RANDOLPH	Checked By:
----------------------	---------------------------------	----------------------------------	-------------