

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 08-10-90			
Company Texaco, Inc.				Connection EPNG					
Pool				Formation Atoka				Unit	
Completion Date 07-19-90		Total Depth 14320		Plug Back TD 13760		Elevation 3643 GL		Farm or Lease Name North Bilbrey	
Coq. Size 7"	Wt. 26#	d 1.995	Set At 12042	Perforations: From 13153 To 13158		Well No. 7			
Thq. Size 2 3/8	Wt. 4.7	d 1.995	Set At 13044	Perforations: From OPEN To END		Unit Sec. Twp. Rge.			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 13044		County Lea	
Producing Thru Tbg		Reservoir Temp. °F 206 @ 13153		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 13153	H 13153	G _g .671	% CO ₂ .48	% N ₂ 1.54	% H ₂ S --	Prover	Meter Run 3.068	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							6457		PKR		48 hrs.
1.	3	X	2.000	463	5.29	110	6170		PKR		1 hr.
2.	3	X	2.000	463	21.20	80	5770		PKR		1 hr.
3.	3	X	2.000	456	36.60	54	5360		PKR		1 hr.
4.	3	X	2.000	463	59.30	41	4895		PKR		1 hr.
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	21.32	50.19	476.2	.9639	1.221	1.038	1307
2	21.32	100.48	476.2	.9813	1.221	1.048	2690
3	21.32	131.04	469.2	1.006	1.221	1.055	3620
4	21.32	168.04	476.2	1.019	1.221	1.064	4743
5							

NO.	R	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	257.5	Mcf/bbl.
1.	.71	570	1.50	.929	A.P.I. Gravity of Liquid Hydrocarbons	53.0 @ 60°	Deg.
2.	.71	540	1.42	.910	Specific Gravity Separator Gas	.671	XXXXXX
3.	.70	514	1.35	.898	Specific Gravity Flowing Fluid	XXXXX	GMIX=.683
4.	.71	501	1.32	.884	Critical Pressure	*668	P.S.I.A. *668
5.					Critical Temperature	*379	R *382

P _c 6470.2	P _c ² 41863.5	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.530$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.133$
NO.	P ₁ ²	P _w	P _w ²
1		6191.8	38338.7
2		5820.5	33878.7
3		5442.5	29621.2
4		5031.3	25313.7
5			

Absolute Open Flow 10,117 Mcfd @ 15.025		Angle of Slope 51	Slope, n .816
---	--	-------------------	---------------

Remarks: *=corrected to 1.54% N ₂	
Well made 2.00 bbls 53.0 API GR. Condensate during test	
**= 4 1/2" 13.5# from 11726 to 14300	
Approved By Division	Conducted By: Pro Well Testers
Calculated By: BM	Checked By: BM