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See Rule 401 & Rule 1122

Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Texaco E. & P. Inc.				Lease or Unit Name Bilbrey 33, Federal #2			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 4/14/94		Well No. #2	
Completion Date 3/28/94		Total Depth 14,950		Plug Back TD 14,910		Elevation	
Csg. Size 7" & 5"		Wt. d		Set At 14,950		Perforations: From: 14,418 To: 14,448	
Tbg. Size 2 3/8"		Wt. 4.7		Set At 14,325		Perforations: From: To:	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 14,325		Formation Morrow	
Producing Thru Tubing		Reservoir Temp. °F 188 @ 14,325		Mean Annual Temp. °F 60		Baro. Press - P *13.2	
L 14,325	H 14,325	Gg .611	% CO ₂ 1.08	% N ₂ .24	% H ₂ S	Prover	Meter Run 4.026
						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							4100		Pkr.		48 Hr.
1.	4"	X	1.750	450	1.00	74	3950		"		1 Hr.
2.	4"	X	1.750	450	5.00	73	3880		"		1 Hr.
3.	4"	X	1.750	450	15.00	66	3140		"		1 Hr.
4.	4"	X	1.750	450	30.00	78	2240		"		1 Hr.
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, F _{pv}	Rate of Flow Q, Mcfd
1.	14.93	21.52	463.2	.9868	1.279	1.041	422
2.	14.93	48.13	463.2	.9877	1.279	1.041	945
3.	14.93	83.36	463.2	.9943	1.279	1.041	1,648
4.	14.93	117.88	463.2	.9831	1.279	1.036	2,293
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcft/bbl.
1.	.68	534	1.47	.923	A.P.I. Gravity of Liquid Hydrocarbons	Dry	Deg.
2.	.68	533	1.47	.923	Specific Gravity Separator Gas	.611	XXXXXXXXXX
3.	.68	526	1.45	.923	Specific Gravity Flowing Fluid	*675	XXXXXX
4.	.68	538	1.49	.932	Critical Pressure	*361	P.S.I.A. P.S.I.A.
5.					Critical Temperature		R R

P_c 4113.2 P_c² 16918.4

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.454$	2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.318$
1.		3964.2	15715.2	1203.2		
2.		3898.4	15197.6	1720.8		
3.		3171.1	10055.6	6862.8		
4.		2297.5	5278.5	11639.9		
5.						

Absolute Open Flow: 3,022 Mcfd @ 15 025 Angle of Slope Θ 53.5 Slope, n .7378

Remarks: Well made 4.0 BBLs. H₂O during test. * = corrected to 1.08 CO₂

Approved By Division: Conducted By: Calculated By: Checked By:
Omega Production Serv. Bob Murry Bob Murry