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See Rule 401 & Rule 1122

State of New Mexico
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 Grady Petroleum Management Co.					Lease or Unit Name (RFU 26-4) Rhodes "B" Fed. #3				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 12/15/97		Well No.		
Completion Date		Total Depth		Plug Back TD 3060'		Elevation		Unit Ltr. - Sec. - TWP - Rge. o 26 26S 37E	
Csg. Size 4 1/2	Wt. 11.6	d 4.082	Set At 3175'	Perforations: From: 2880' To: 3022'			County Lea		
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 2993'	Perforations: From: open To: end			Pool Rhodes Gas Pool		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single				Packer Set At none			Formation Upper Yates(Gas)		
Producing tbgs	Reservoir Temp. °F 104	Mean Annual Temp. °F 60		Baro. Press - P _a 13.2			Connection to air		
2906'	H 2906'	Gg .716	% CO ₂ 5.5	% N ₂ 4.5	% H ₂ S	Power 6	Meter Run positive choke		Taps

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	Orifice X 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		shut in				1015	56	1155		72hr
1.		20/64	505		60	505	60	652		1hr
2.		16/64	285		64	285	64	454		1hr
3.		12/64	190		64	190	64	418		1hr
4.		10/64	214		68	214	68	411		1hr
5.		8/64	234		70	234	70	412		1hr

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.	1.771		518.2	1.000	1.182	1.053	1142
2.	1.112		298.2	.9962	1.182	1.029	402*
3.	.6101		203.2	.9962	1.182	1.020	149
4.	.4173		227.2	.9924	1.182	1.022	114
5.	.2618		247.2	.9905	1.182	1.028	78

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.	.75	520	1.39	.902	dry	n/a			682	375
2.	.44	524	1.40	.944				XXXXXX		
3.	.30	524	1.40	.962				XXXXXX		
4.	.33	528	1.41	.958					P.S.I.A.	P.S.I.A.
5.	.36	530	1.41	.955					R	R

NO.	P _f ²	P _g ²	P _s ²	P _f ² - P _s ²
1.	268.5	440	194	1332
2.	88.9	448	201	1325*
3.	41.3	458	210	1316
4.	51.6	469	220	1306
5.	61.1	491	241	1285

1) $\frac{P_f^2}{P_f^2 - P_g^2} = 1.152$

2) $\left[\frac{P_f^2}{P_f^2 - P_g^2} \right]^n = 1.152$

AOF = Q $\left[\frac{P_f^2}{P_f^2 - P_g^2} \right]^n = 463$

Absolute Open Flow **463** Mcfd @ 15.025

Angle of Slope θ **45**

Slope, n **1.00**

Remarks: Bottom hole pressures were measured with a Kuster Guage set at 2906'.

5bbls of water were made during the test. Rate #1 was not used due to excessive water.

Approved By Division

Conducted By:

Reggie Reston

Calculated By:

Reggie Reston

Checked By:

RRC

