

Submit in duplicate to
appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-122
Revised 4-1-91

O. C. D.

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MERIT ENERGY COMPANY						Lease or Unit Name FEDERAL 4 COM					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12/15/92		Well No. 1			
Completion Date 8-30-92		Total Depth 11,600		Plug Back TD 10,523		Elevation 3183 GR		Unit Ltr. - Sec. - TWP - Rge. 4 21S 27E			
Csg. Size 5 1/2	Wt. 17	d 	Set At 11600	Perforations: From: 10348 To: 10360				County EDDY			
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 10251	Perforations: From: To: 				Pool BURTON FLAT			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At 10251		Formation STRAWN			
Producing Thru TBG		Reservoir Temp. °F 60		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection PHILLIPS			
L 10282	H 10282	G _g .703	% CO ₂ .37	% N ₂ .89	% H ₂ S 	Prover 		Meter Run 4.026		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							1802		PKR		72 HRS
1.	4	X	1.000	31.6	19.0	55°	1650		"		1 HR
2.	4	X	1.000	30.8	43.7	56°	1530		"		1 HR
3.	4	X	1.000	30.6	59.2	58°	1401		"		1 HR
4.	4	X	1.000	35.3	75.9	60°	1195		"		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 F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	4.753	29.18	44.8	1.005	1.193	1.006	167
2.	4.753	43.85	44.0	1.004	1.193	1.006	251
3.	4.753	50.92	43.8	1.002	1.193	1.006	291
4.	4.753	60.67	48.5	1.000	1.193	1.006	346
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	DRY GAS	Mcft/bbl
1.	.06	515	1.31	.989	A.P. I Gravity of Liquid Hydrocarbons	DRY	Deg.
2.	.06	516	1.31	.989	Specific Gravity Separator Gas	.703	XXXXXXXXXX
3.	.06	518	1.31	.989	Specific Gravity Flowing Fluid	XXXXXX	
4.	.07	520	1.32	.989	Critical Pressure	668 PSIA	PSIA
5.					Critical Temperature	392 R	R

$P_c = 1815.2$ $P_c^2 = 3295.0$				
NO.	P _i ²	P _w	P _w ²	$\frac{P_i^2 - P_w^2}{P_c^2 - P_w^2}$
1.		1663.4	2767.1	527.9
2.		1543.8	2383.4	911.6
3.		1415.1	2002.5	1292.4
4.		1209.8	1463.5	1831.4
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.242$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .417$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.498$

Absolute Open Flow 417 Mcfd @ 15.025	Angle of Slope θ 63.5	Slope, n .500
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Remarks: **NO FLUID PRODUCED DURING TEST.**

Approved By Division	Conducted By: JOHN WEST ENGINEERING	Calculated By: BM	Checked By: BM
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