

OIL CONSERVATION DIVISION

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator U. M. C. PETROLEUM				Lease or Unit Name SHUGART FED 22			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 7/28/97		Well No. 1	
Completion Date 7-24-97		Total Depth 11775		Plug Back TD 11715		Elevation	
Csg. Size 5 1/2		Wt. 20# d 4.778 17# 4.892		Set At 11775'		Perforations: From: 11611 To: 11641	
Tbg. Size 2 7/8		Wt. 6.5 d 2.441		Set At 11543		Perforations: From: To:	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 11547		Formation MORROW	
Producing Thru Tbg		Reservoir Temp. °F 189.5		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2	
L 11547		H 11547		G _s .663		% CO ₂ .60	
				% N ₂ .47		% H ₂ S	
				Prover		Water Run 4.026	
				Taps F/G			

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							2670		PKR		
1.	4.026	X	1.750	140	9	63 °	2600				60 min
2.	4.026	X	1.750	140	30	66°	2545				60 min
3.	4.026	X	1.750	140	64	68°	2520				60 min
4.	4.026	X	1.750	220	82	70°	2446				60 min
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.	14.93	37.13	153.2	.9971	1.228	1.034	701
2.	14.93	67.93	153.2	.9943	1.228	1.034	1042
3.	14.93	99.01	153.2	.9924	1.228	1.033	1860
4.	14.93	138.28	233.2	.9905	1.228	1.032	2591
5.							

NO.	P _i	Temp. °R	T _i	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl
1.	.777	523	1.39	.901	86.02	
2.	.781	526	1.40	.901	51.4	Deg.
3.	.784	528	1.41	.903	.663	XXXXXXXXXX
4.	.787	530	1.41	.903	N/A	XXXXXX
5.					673	P.S.I.A.
					374	R

P_e 2683.2 P_w 7199.56

NO.	P _i ²	P _w ²	P _e ²	P _e ² - P _w ²	1) $\frac{P_e^2}{P_e^2 - P_w^2} = 6.715$	2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 6.715$
1.	6828.8	2614.3	6834.7	364.8		
2.	6544.4	2560.7	6557.4	642.2		
3.	6417.1	2541.3	6458.4	741.2		
4.	6047.7	2475.4	6127.5	1072.1		
5.						

$$AOF = Q \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 17.400$$

Absolute Open Flow 17.400 Mcfd @ 15.025 Angle of Slope 45° Slope, n 1.000

Remarks: * MADE 3 BBL OF 51.4 API GRAVITY CONDENSATE

Approved By Division	Conducted By: PRO WELL TESTING	Calculated By: M.B.	Checked By: B.M.
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