

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 2-14-78		Spud Date 1-18-78	
Company DOYLE HARTMAN				Connection TO AIR			
Pool LANGLIE MATTIX				Unit QUEEN			
Completion Date 2-10-78		Total Depth 3,504'		Plug Back TD 3,480'		Elevation 3244 GR.	
Farm or Lease Name FOWLER STATE				Well No. 2			
Chg. Size 4 1/2"	Wt. 10.5#	d 4.052"	Set At 3,504'	Perforations: From 3,239' To 3,324'		Unit Sec. Twp. Rge. L 16 24s 37E	
Thg. Size 2 3/8"	Wt. 4.6#	d 1.995"	Set At 3,329	Perforations: From OPEN ENDED		County LEA	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At NONE		State NEW MEXICO	
Producing Thru TUBING		Reservoir Temp. °F 105 @ 3,280'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L	H	Gg .691	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run Taps 6" POSITIVE CHOKES

FLOW DATA				TUBING DATA		CASING DATA		Duration of Flow
NO.	POSITIVE CHOKES	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI	6" CHOKE NIPPLE				200	41	201	24 HR
1.	1/8	198		45	198	45	199	1 HR
2.	5/32	196		47	196	47	197	1 HR
3.	3/16	194		50	194	50	195	1 HR
4.	7/32	192		54	192	54	193	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, Fpv	Rate of Flow Q, Mcfd
1	.2618		211.2	1.015	1.203	1.027	69
2	.4173		209.2	1.013	1.203	1.026	109
3	.6101		207.2	1.010	1.203	1.026	158
4	.8419		205.2	1.006	1.203	1.025	214
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio DRY GAS Mcf/bbl.	
1	.31	505	1.30	.948	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.	
2	.31	507	1.31	.950	Specific Gravity Separator Gas .691 XXXXXXXXXX	
3	.31	510	1.31	.950	Specific Gravity Flowing Fluid XXXXXXXX	
4	.31	514	1.32	.951	Critical Pressure 669 P.S.I.A. _____ P.S.I.A.	
5					Critical Temperature 388 R _____ R	

$P_c = 214.2$ $P_w^2 = 45.9$					$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 13.500$		$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 13.500$	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²				
1		212.2	45.1	0.8				
2		210.2	44.2	1.7				
3		208.2	43.3	2.6				
4		206.2	42.5	3.4				
5								

$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.889$			
Absolute Open Flow 2,889 Mcfd @ 15.025 Angle of Slope 45 Slope, n 1.000			
Remarks: _____			

Approved By Commission: Udy Signed by Jerry Seaton Dist 1, Supv	Conducted By: M.C.T.	Calculated By: R.R.	Checked By: J.W.W.
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$$\begin{aligned} \text{ABS. SLOPE } N &= Q_1 = 440 = 2.643452 \\ Q_2 &= 44 = 1.643452 \\ N &= 1.000000 \end{aligned}$$

$$\text{CAOF} = 214 \frac{45.9}{3.4} \cdot 1.00 = 2.889 \text{ MCF/DAY}$$

