

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 1-18-82	
Company Enserch Exploration, Inc.					Connection El Paso Natural Gas				
Pool Fairview Mills (Atoka)					Formation Atoka				
Completion Date 7-16-81			Total Depth 17449		Plug Back TD 14965		Elevation 3377 KB 3347 GL		Unit T. G. Bates
Csg. Size 7 3/4	Wt. 46.1	d N/A	Set At 16849	Perforations: From 14763 To 14772		Well No. 1			
Thq. Size 2 7/8	Wt. 6.5	d 2.441	Set At 14650	Perforations: From To		Unit G	Sec. 14	Twp. 25S	Rge. 34E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 14650		County Lea		
Producing Thru Tubing		Reservoir Temp. °F 194 @ 14568		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L 14768	H 14768	G _g 0.585	% CO ₂ 1.07	% N ₂ 0.72	% H ₂ S Nil	Prover	Meter Run X	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	31 hours								Pkr.	-	
1.	4.026" X 1.250"			138.05	4.41	76	1125	76	Pkr.	-	60 mins.
2.	4.026" X 1.250"			143.60	13.69	81	812	81	Pkr.	-	60 mins.
3.	4.026" X 1.250"			155.00	59.29	78	696	78	Pkr.	-	60 mins.
4.	4.026" X 1.250"			157.91	64.00	77	486	77	Pkr.	-	60 mins.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	7.469	25.827	151.25	.9850	1.3074	1.009	250.6
2	7.469	46.331	156.80	.9804	1.3074	1.010	448.0
3	7.469	99.863	168.20	.9831	1.3074	1.011	969.2
4	7.469	104.647	171.11	.9840	1.3074	1.011	1016.6
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ 0.585 X X X X X X X X
3					Specific Gravity Flowing Fluid _____ X X X X X 0.585
4					Critical Pressure _____ P.S.I.A. 672 P.S.I.A.
5					Critical Temperature _____ R 350 R

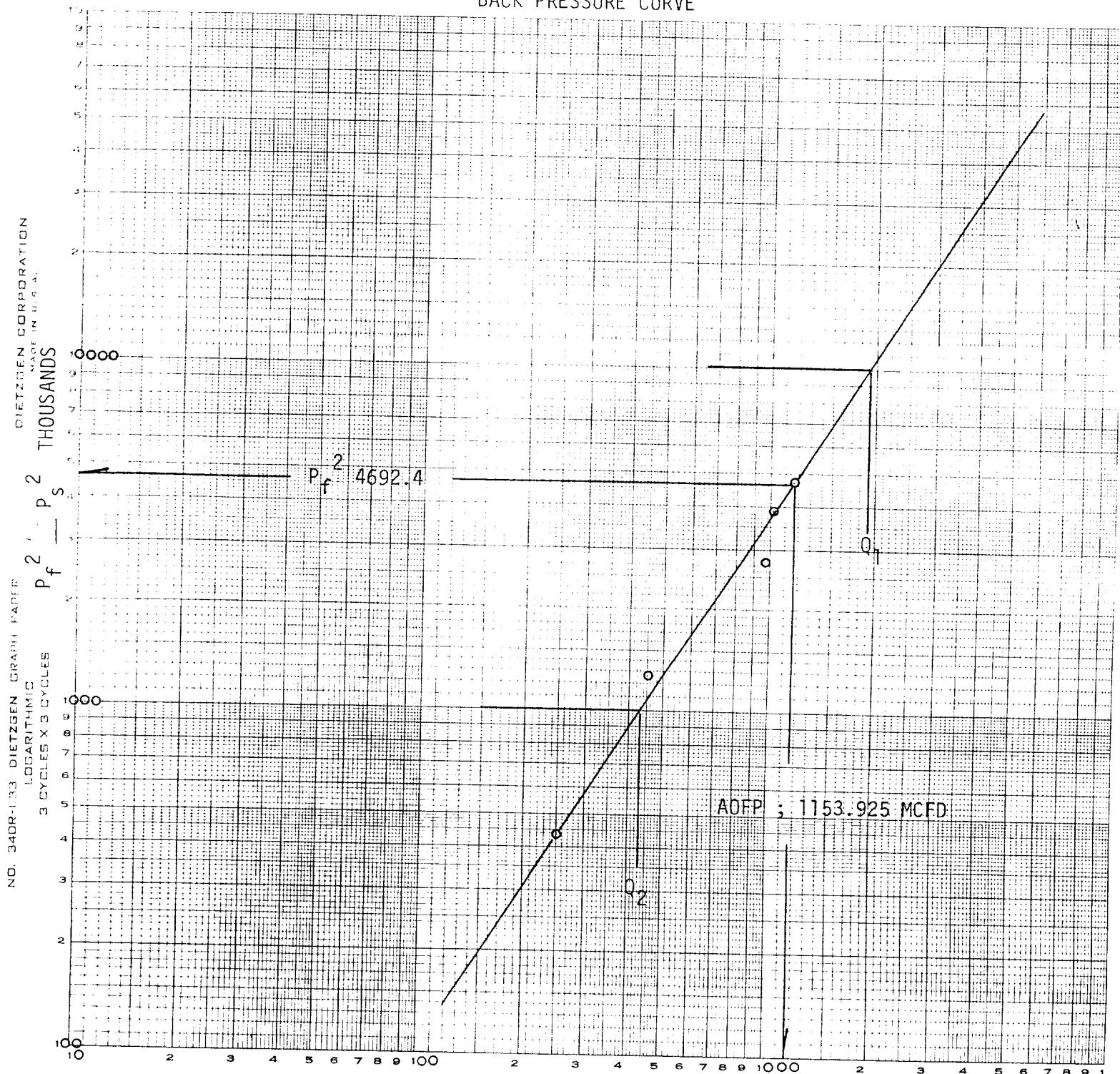
$P_f = 2166.2$ $P_s = 4692.4$				$(1) \frac{P_f^2}{P_f^2 - P_s^2} = 1.216120$	$(2) \left[\frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1.135083$
NO.	P _t ²	P _s ²	P _s ²	P _f ² - P _s ²	
1		2063.2	4256.8	435.6	
2		1853.2	3434.4	1258.0	
3		1385.2	1918.8	2773.6	
4		931.2	833.9	3858.5	
5					

Absolute Open Flow 1152.666 Mcfd @ 15.025		Angle of Slope 57° 4'	Slope, n 0.647564
Remarks: _____			

Approved By Commission: Lea	Conducted By: Tefteller, Inc.	Calculated By: Farrest Tefteller	Checked By:
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Company : Enserch Exploration, Inc.
 Well : T. G. Bates No. 1
 Field : Wildcat Well
 County : Lea
 State : New Mexico
 Date : January 18, 1982

BACK PRESSURE CURVE



$$Q_1 = 1910 ; \text{LOG } Q_1 = 3.281033$$

$$Q_2 = 430 ; \text{LOG } Q_2 = 2.633469$$

$$n = 0.647564$$

$$\theta = 57^{\circ} 4'$$