

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

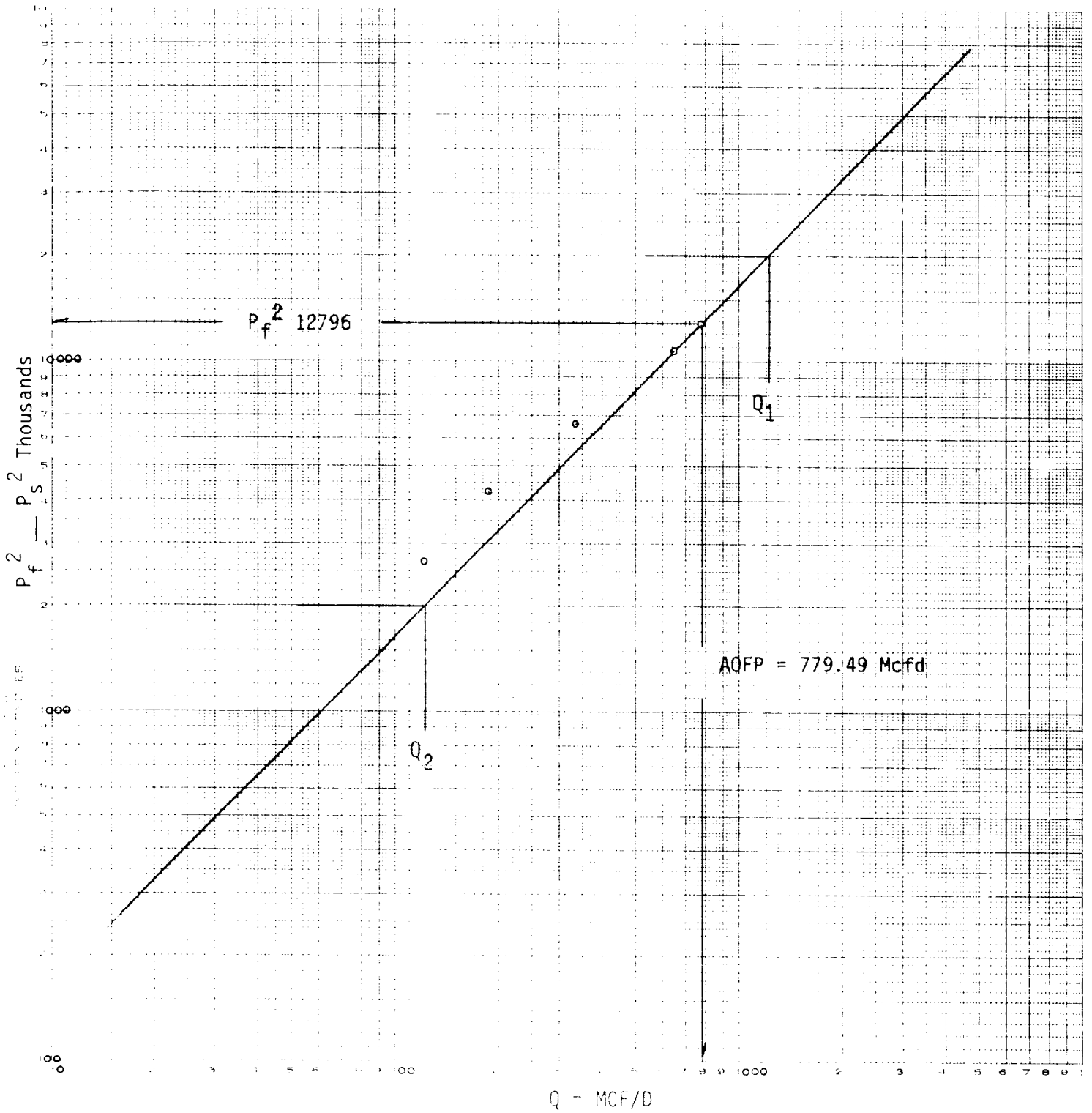
Form C-122
 Revised 9-1-65

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Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date 8-1-77		AUG 16 1977							
Company Maddox Energy Corporation			None								
Pool Wildcat			Morrow								
Completion Date 8-1-77		Total Depth 8990		Elevation 3390KB							
Form or Lease Name Spencer Com.		O. C. C.		ARTESIA, OFFICE							
Eq. Size 5 1/2	Wt. 15.5	Set At 3990	Perforations: From 8702 To 8735		Well No. 1						
Thq. Size 2 3/8	Wt. 4.7	Set At 3636	Perforations: From To		Unit Sec. Twp. Rge. F 9 18S 26E						
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single			Packer Set At 8639		County Eddy						
Producing Thru Tubing		Reservoir Temp. °F 155 @ 8600	Mean Annual Temp. °F 70	Baro. Press. - P _a 13.2	State New Mexico						
L 8719	H 8719	G _g 0.611	% CO ₂	% N ₂	% H ₂ S						
Prover		Meter Run X		Taps Flange							
FLOW DATA			TUBING DATA		CASING DATA						
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	Duration of Flow
SI	180 hrs.						2773				
1.	3"	x	0.750	407	3	93	2470	93	Pkr		60 min.
2.	3"	x	0.750	407	7	88	2260	88	"		60 min.
3.	3"	x	0.750	405	22.75	86	1924	86	"		60 min.
4.	3"	x	0.750	400	85	86	1197	86	"		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	2.672	35.505	420.2	0.9697	1.279	1.031	121.31				
2	2.672	54.235	420.2	0.9741	1.279	1.033	186.50				
3	2.672	97.540	418.2	0.9759	1.279	1.033	336.04				
4	2.672	187.409	413.2	0.9759	1.279	1.033	645.66				
5											
NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.						
1	0.63	553	1.53	.941	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.						
2	0.63	548	1.51	.938	Specific Gravity Separator Gas 0.611 XXXXXXXXXX						
3	0.62	546	1.51	.938	Specific Gravity Flowing Fluid XXXXX						
4	0.62	546	1.51	.938	Critical Pressure 671 P.S.I.A. P.S.I.A.						
5					Critical Temperature 362 R R						
P _f 3577.2 P _f ² 12796											
NO.	P _f	P _s	P _s ²	P _f ² - P _s ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2072836$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2072836$						
1		3184.2	10139	2657							
2		2921.2	8533	4263							
3		2479.2	6146	6650	A ₁ $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 779.49$ Mcfd						
4		1482.2	2197	10599							
5											
Absolute Open Flow 779.49 Mcfd @ 15.025					Angle of Slope θ 45°			Slope, n 1.000			
Remarks: BHP measured with Amerada RPG-gauge Serial No. 9383N 0-6000 psi											
Approved By Commission:			Conducted By: Teffeller, Inc.			Calculated By: B. Combest			Checked By:		

Company : Maddox Energy Corporation
 Well : Spencer Com. No
 Field : Wildcat
 County : Eddy
 State : New Mexico
 Date : August 1, 1977



$Q_1 = 1210$; $\text{Log } Q_1 = 3.082785$
 $Q_2 = 121$; $\text{Log } Q_2 = 2.082785$
 $n = 1.0000$
 $\theta = 45^\circ$

SOUTHWESTERN LABORATORIES

1703 West Industrial — P. O. Box 2150

MIDLAND, TEXAS 79701

(915) 683-3348

FRACTIONAL ANALYSIS REPORT

DATE RECEIVED 8/02/77

SAMPLE MARKED Spencer #1, Lea County, New Mexico

FILE NO. C-1950-G

400 psig, Temp. — 88°

LAB. NO. 40670

SAMPLE FROM Maddox Energy Corporation

DATE SECURED 8/02/77

DATE OF RUN 8/03/77

SECURED BY Tefteller, Inc.

COMPONENT	MOL. %	G. P. M.	LIQUID VOL. %
Oxygen			
Nitrogen	0.69		
Carbon Dioxide	0.38		
Methane	91.82		
Ethane	4.74		
Propane	1.57	0.431	
I-Butane	0.24	0.078	
N-Butane	0.36	0.113	
I-Pentane	0.12	0.044	
N-Pentane	0.08	0.029	
Hexanes	None Det.	---	
Heptanes & Heavier	None Det.	---	
Hydrogen Sulfide	--		
Helium			
Hydrogen			
Carbon Monoxide			
TOTALS	100.00	2.695	

CONDENSATE VALUES, G.P.M.

_____ Propane _____
 _____ Butane _____
 _____ Gasoline _____

HEATING VALVE, B.T.U. Per Cu. Ft.*

Calculated from % Composition 1078
 Calculated water saturated 1059

SULPHUR CONTENT, Grains Per 100 Cu. Ft.*

Hydrogen Sulfide _____
 Mercaptans _____

SPECIFIC GRAVITY*

Calculated from % Composition 0.611

*14,696 lbs./sq. in., 60° F

REMARKS

RECEIVED

AUG 6 1977

COPIES: 3cc Maddox Energy Corporation
 1cc Tefteller, Inc.

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Jack H. Barton