

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3-27-89	
Company Mobil Producing Tex.&N.M.				Connection None	
Well South Shoebar				Formation Atoka	
Completion Date 3-23-89		Total Depth 12330		Plug Back TD 12240	
Elevation 3948KB		Farm or Lease Name State Section 22 Com			
Cas. Size 5½	Wt. 17#	d 4.892	Set At 12240	Perforations: From 11970 To 11985	
Trq. Size 2 7/8	Wt. 6.5#	d 2.441	Set At 11936	Perforations: From open To ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11901	
Producing Thru Tbg		Reservoir Temp. °F 163 @ 11978		Mean Annual Temp. °F 60°	
Baro. Press. - P _a 13.2		State New Mexico			
L -	H -	G _g 0.646	% CO ₂ 0.32	% N ₂ 1.37	% 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. DWT	Temp. °F	
SI							1075	78	91 hrs.
1.	4.026 x 1.500			50	3.75	84	864	77	1.0 hrs.
2.	4.026 x 1.500			50	15	101	690	64	1.0 hrs.
3.	4.026 x 1.500			50	35	105	534	66	1.0 hrs.
4.	4.026 x 1.500			50	63	107	316	66	1.0 hrs.
5.	4.026 x 1.500			65	80	99	130	58	1.0 hrs.

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, Mscf/d
1	10.84	15.39	63.2	0.9777	1.244	-	203
2	10.84	30.79	63.2	0.9628	1.244	-	400
3	10.84	47.03	63.2	0.9594	1.244	-	608
4	10.84	63.10	63.2	0.9577	1.244	-	815
5	10.84	79.09	78.2	0.9645	1.244	-	1029

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio TSTM	Mcf/bbl.
1	0.09	544	1.47	-	A.P.I. Gravity of Liquid Hydrocarbons 40.6 @ 60°	Deg.
2	0.09	561	1.52	-	Specific Gravity Separator Gas 0.646	X X X X X X X X
3	0.09	565	1.53	-	Specific Gravity Flowing Fluid X X X X X	
4	0.09	567	1.54	-	Critical Pressure 669	P.S.I.A. P.S.I.A.
5	0.12	559	1.51	-	Critical Temperature 369	R R

P _c 1508.2*	P _c 2274.7				(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.059$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.059$
NO.	P _i ²	P _w	P _i ²	P _i ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1090$	
1		1234.2	1523.2	751.5		
2		1018.2	1036.7	1238.0		
3		814.2	662.9	1611.8		
4		559.2	312.7	1962.0		
5		355.2	126.2	2148.5		

Absolute Open Flow 1090	Mscf @ 15.025	Angle of Slope @ 45°	Slope, n 1.000
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Remarks: *Bottom Hole Pressure @ 11978' (-8030) used for pressure calculations
Slope plotted too flat, therefore a slope of 1.000 was drawn through high rate of flow

APR 18 1989
Approved: *Paul Kautz* Geologist
Conducted By: Well Testing Wireline Service Co., Inc.
Calculated By: Donnie Dickerson
Checked By: *Donnie Dickerson*

RECEIVED

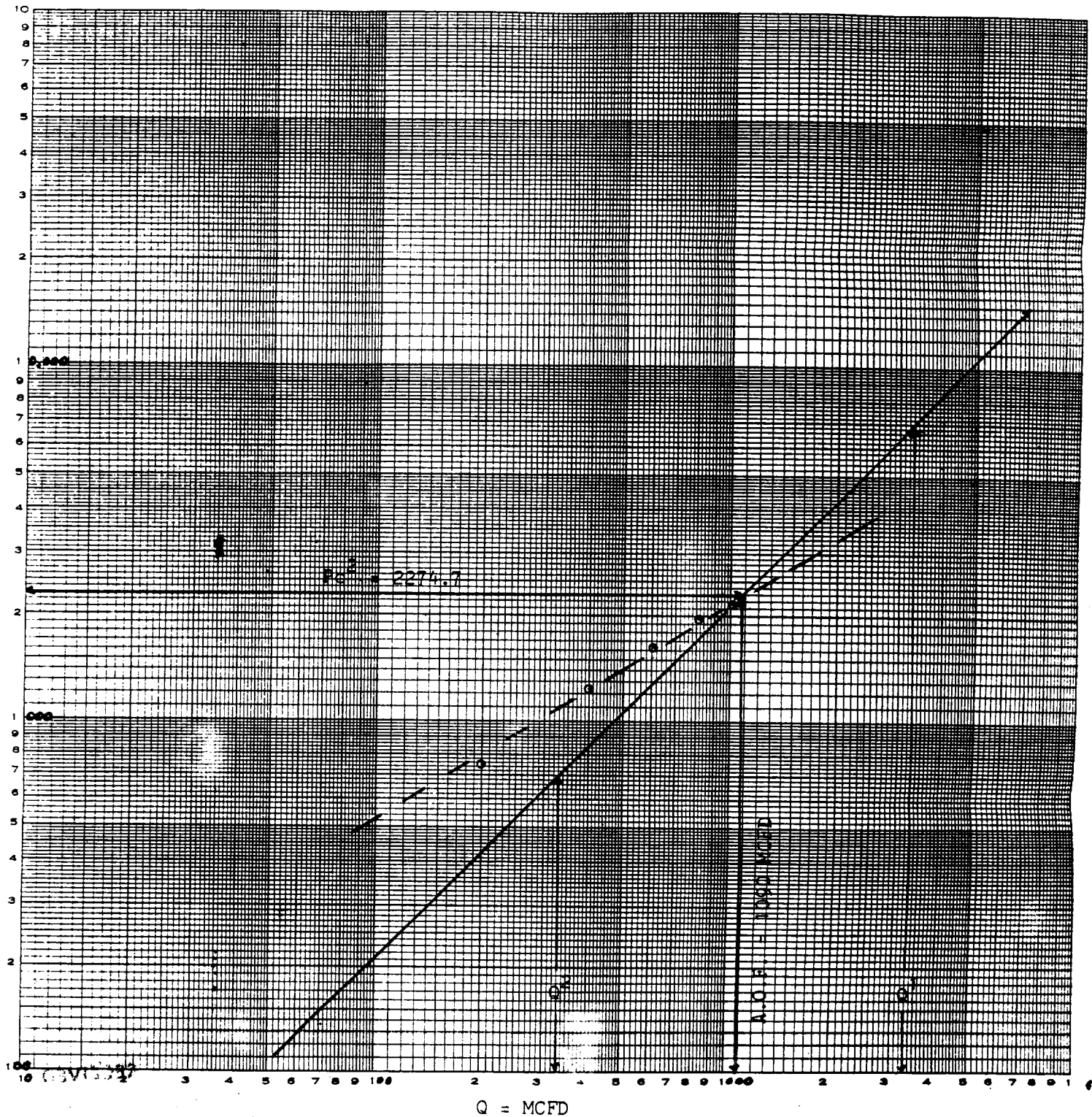
APR 17 1989

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HOBBS OFFICE

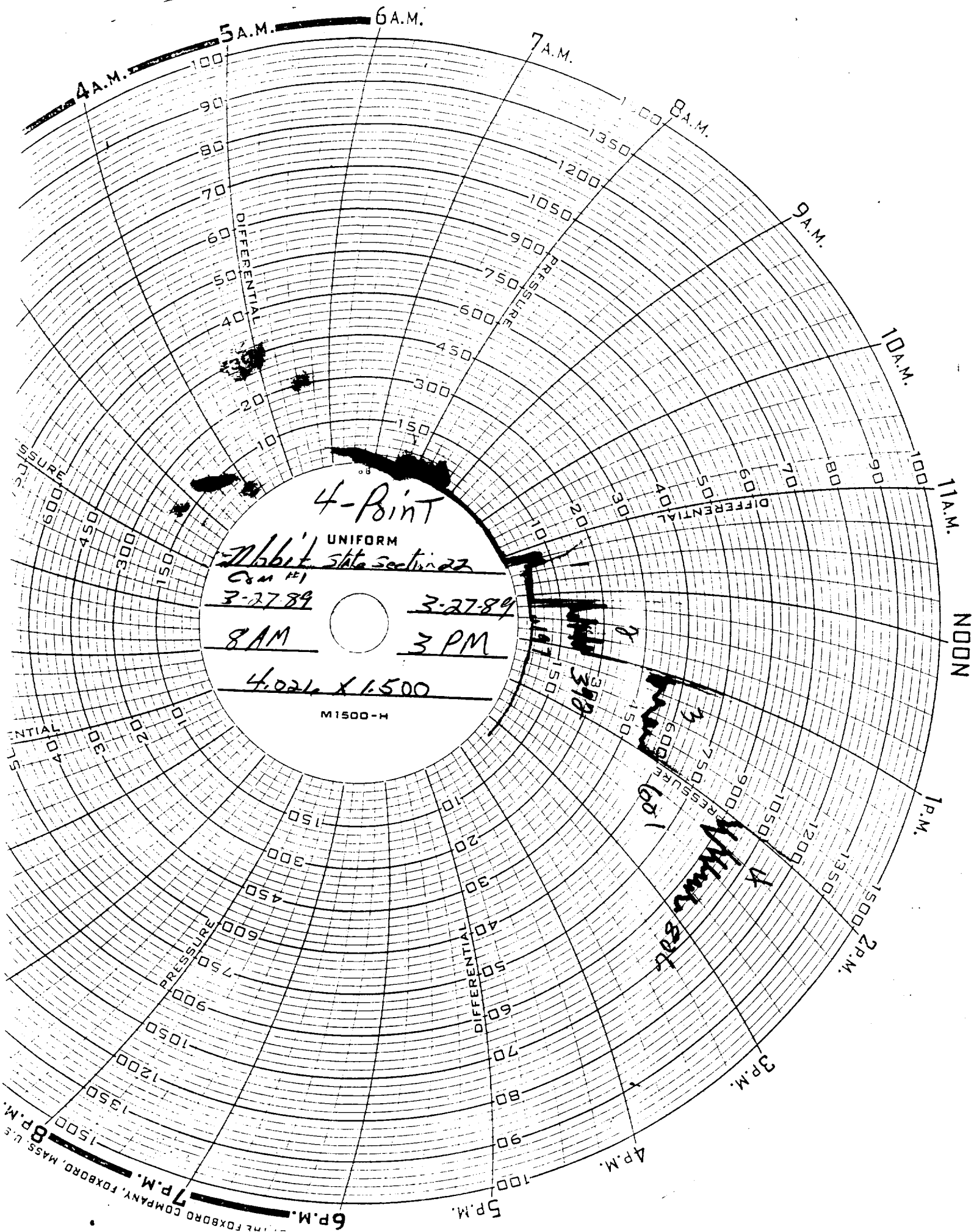
Comp: Mobil Producing Texas & New Mexico Inc.
 Well: State Section 22 Com, No. 1
 Location: I 22-17s-35e
 County: Lea
 Date: March 27, 1989

$P_c^* - P_w^*$ (Thousands)
 DIETZEN GRAPH PAPER
 MADE IN U.S.A.

NO. 340R-L33 DIETZEN GRAPH PAPER
 LOGARITHMIC
 3 CYCLES X 3 CYCLES



$$\begin{aligned}
 Q_1 &= 3300 \text{ MCFD}; \text{Log } Q_1 = 3.5185139 \\
 Q_2 &= 330 \text{ MCFD}; \text{Log } Q_2 = 2.5185139 \\
 \frac{Q_1}{Q_2} &= 10.0000000 = 1.000
 \end{aligned}$$



4-Point

UNIFORM

Thabit's Section 22

Q.M. #1

3-27-89

3-27-89

8 AM

3 PM

4.024 x 1.500

M1500-H

3-27-89
601

Thabit's 806

THE FOXBORO COMPANY, FOXBORO, MASS. U.S.
8 P.M.
7 P.M.
6 P.M.

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